SITE ASSESSMENT AND REMEDIATION REPORT PRESTON WEED CONTROL WHITTIER, CALIFORNIA

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1. INTRODUCTION AND SITE HISTORY

This report details the environmental assessment and remediation performed at the Preston Weed Control (PWC) site in Whittier, California. Assessment work was performed by IT Corporation (IT) and USPCI whereas the remediation work was performed solely by USPCI. The Union Pacific Railroad (UPRR) owns the property which was formerly leased to the Preston Weed Control Company.

The PWC site is located at 12363 Whittier Boulevard in the City of Whittier, County of Los Angeles, California. PWC leased the property from UPRR in 1953 and used it as a pesticide/ herbicide blending facility until 1985 when PWC vacated the property. The site is approximately 1/2 acre in area and lies at the corner of Whittier and Mar Vista Boulevards (see Figure 1). Figure 2 shows the original configuration of known structures on the site as well as 13 work areas which were identified during the assessment phase. The PWC company operated the site from the following structures: an office/warehouse, a concrete bermed aboveground tank farm (containing a 20,000 gallon tank), a garage, an underground fuel storage tank, an old building foundation, a concrete drive, and underground pipelines.

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The PWC company blended pesticides and herbicides during their tenure on the site. Results of IT's historical research identified the contents of the aboveground tank as Arco Weedkiller "A" Lite, described as a aromatic petroleum hydrocarbon herbicide. Material Safety Data Sheets (MSDS) on the major component of this herbicide as well as another similar product are included in Appendix I. No other data from on site operations has been found.

Initial site assessment work was performed by IT in August 1987. The work included 10 borings and numerous surficial soil samples. Results (report dated September 1987) indicated three areas with total petroleum hydrocarbon (TPH) contamination and two with pesticide contamination. The areas with TPH contamination were the garage floor (areas 5 and 6), the UST location (area 7), and the northwest surface (area 13). The two areas with pesticide contamination were the warehouse (area 8) and the southeast corner (area 11). A second phase of assessment work was performed by USPCI in August 1989 to assess the gravel parking area not previously sampled and to determine the depth of contamination in two areas (areas 11 and 13) which were found to have surface contamination but not sampled at depth.

Remediation of the PWC site began in November 1989 and on-site work was completed May 23, 1990. All site structures were demolished and removed in Phase I. A total of 175 tons of debris was removed in this phase of the remediation. Upon achieving access to the warehouse the wooden flooring and soil beneath were sampled and found to contain DDT and were therefore handled as hazardous waste. All soil and debris classified as hazardous waste, as well as the underground

USPCI





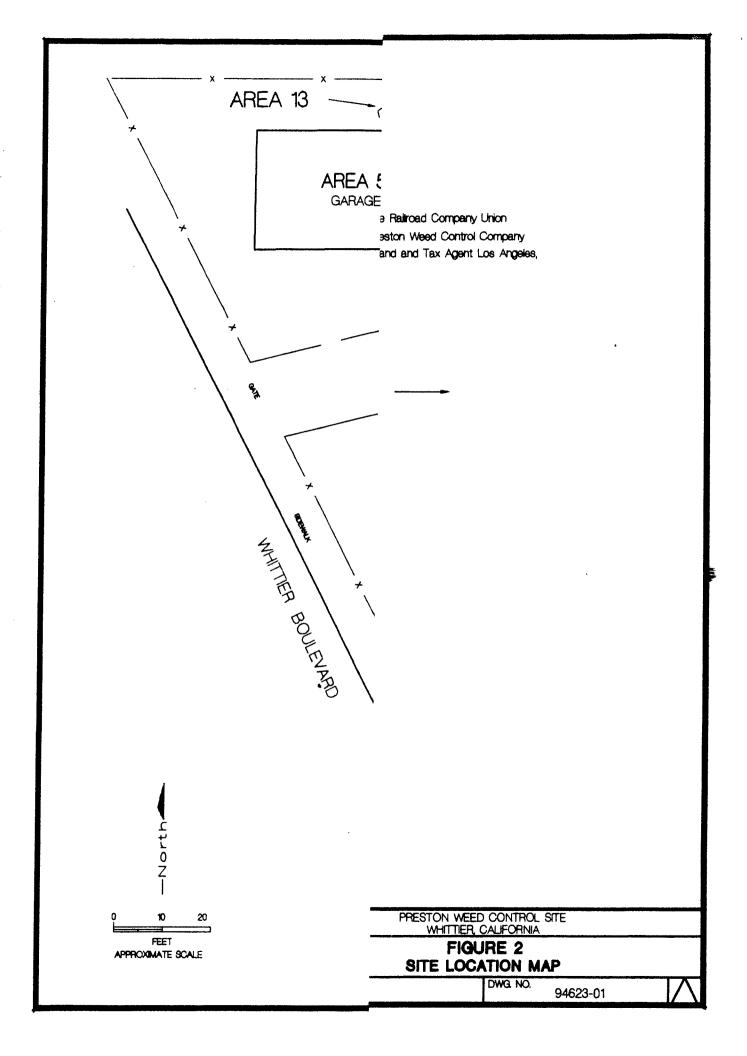


LOCATION MAP



PRESTON VEED CONTROL SITE VHITTIER, CALIFORNIA FOR

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storage tank, were removed during Phase II. Approximately 950 cubic yards of material were removed in Phase II of the remediation.

Verification sampling was performed after removal of all identified hazardous wastes. Removal was verified in all areas with the exception of three samples that contained low residual TPH concentrations at significant depths beneath ground surface. These concentrations represent no hazard to public health or the environment due to their relative low concentrations and their isolated locations.

This report will detail all work performed by USPCI in the remediation of the PWC site. Supporting data is also supplied in the Appendices to the report.

2. SITE INVESTIGATIONS

The initial site assessment (Phase I) was performed by IT in August, 1987. The site was divided into thirteen work areas as indicated in Figure 2. Composites of surface samples and composites of samples from borings were analyzed for Total Petroleum Hydrocarbons (TPH), Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX), pesticides, and other classes of organic and inorganic compounds including those on the California Total Threshold Limit Concentration (TTLC) list. The TTLC list is described in the California Administrative Code, Title 22, Section 66699. The list gives concentrations of persistent and bioaccumulative substances that, if exceeded, classify a waste as a hazardous waste. Table 1 gives the TTLC values for substances investigated at the Preston Weed Control site. The Phase II site Assessment was performed by USPCI. The purpose of the Phase II assessment was to establish the limits of contamination discovered during the Phase I assessment and define areas for remediation.

2.1 PHASE I ASSESSMENT

The results of the Phase I assessment for each of the thirteen areas of the site are described below. The analyses and methods used by IT during its assessment are summarized in Table 2.

2.1.1 Area 1 (Tank Farm)

In Area 1, IT obtained six samples from the surface and five samples from a depth of three feet at five of the six locations with a hand auger. The surface samples were composited into one sample and the three-foot samples were composited into one sample prior to analysis. The composites were analyzed for TPH, BTEX, polynuclear aromatic hydrocarbons(PNA), polychlorinated biphynels

Table 1 TTLC	Values
ANALYTE	TTLC VALUE (mg/Kg)
Lead	1,000
Aldrin	1.4
Chlordane	2.5
DDT, DDE, DDD	1.0
Dieldrin	8.0
Endrin	0.2
Heptachlor	4.7
Lindane	4.0
Methoxychlor	100
Polychlorinated biphenyls (PCB)	50
Toxaphene	5 .

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TABLE 2 SUMMARY OF ANALYTICAL METHODS INITIAL SITE ASSESSMENT BY IT CORPORATION

AREA	LOCATION	LABORATORY ANALYSIS
1	TANK FARM	TPH, BTEX, PNA, PCB, PESTICIDES
2	TANK FARM SUMP	TPH, BTEX, PNA, CHC
3	PUMPING STATION	TPH, BTEX, PNA
4	OLD FOUNDATION	TPH, BTEX, PNA, CHC, PCB, PESTICIDES
5	GARAGE FLOOR	ТРН
6	GARAGE SUMP	TPH, CHC, PESTICIDES
7	UNDERGROUND TANK	TPH, TOTAL LEAD
8	OFFICE/WAREHOUSE	PNA, PESTICIDES
9	LOADING DOCK	TPH, BTEX, PNA, PESTICIDES
10	PRODUCT PIPELINES	TPH, BTEX, PNA, PESTICIDES
11	SOUTHEAST SURFACE	PNA, PESTICIDES, CHC
12	NORTHEAST SURFACE	PNA, PESTICIDES
13	NORTHWEST SURFACE	TPH, PESTICIDES, CHC

<u>Pesticides and Polychlorinated Biphenyls (PCB)</u>: EPA methods 3550 and 8080. Extraction with dichloromethane and analysis by gas chromatography with electron capture detection.

<u>Polynuclear Aromatic Hydrocarbons (PNA)</u>: EPA methods 3550 and 8100. Extraction with methylene chloride and analysis by gas chromatography with flame ionization detector.

<u>Chlorinated Hydrocarbons (CHC)</u>: EPA methods 3550 and 8120. Extraction with methylene chloride and analysis by gas chromatography with electron capture detector.

Benzene, Toluene, Ethylbenzene and Xylenes: EPA methods 8015, 8020, and 5030. Extraction by purge and trap. Analysis by gas chromatography with flame ionization and photoionization detectors.

Total Recoverable Petroleum Hydrocarbons (TPH): EPA methods 3550 and 418.1. Extraction with 1,1,2 trichloro trifluoroethane. Analysis by infrared spectoscopy.

<u>Semi-Volatile Organic Compounds</u>: EPA method 8270. Analysis by gas chromatography - mass spectrometry.

<u>Lead</u>: EPA method 7241. Samples digested with acid and analyzed by flame atomic absorbtion spectroscopy.

(PCB), and Pesticides. Low levels of pesticides were detected in the two composites, all below TTLC limits. The surface samples results were 0.01 mg/Kg DDE, 0.03 mg/Kg DDT, and 0.8 mg/Kg Chlordane. The three foot composite sample was found to contain DDT at 0.03 mg/Kg.

2.1.2 Area 2 (Tank Farm Sump)

Adjacent to the tank farm sump, a power auger was used to obtain a sample from a depth of three feet. The sample was analyzed for TPH, BTEX, PNA, and chlorinated hydrocarbons (CHC). No analytes were found above detection limits in this sample.

2.1.3 Area 3 (Pumping Station)

Three borings were advanced with a CME hollow-stem auger drill rig to a depth of 20 feet. Samples were obtained from each boring at depths of 5, 10, 15, and 20 feet. The four samples were composited into one sample for each boring and analyzed for TPH, BTEX, and PNA. No analytes were discovered above detection limits.

2.1.4 Area 4 (Old Foundation)

Four samples were obtained from a depth of three feet with a hand auger, composited, and analyzed for TPH, BTEX, PNA, CHC, PCB, and Pesticides. No analytes were detected above detection limits.

2.1.5 Area 5 (Garage Floor)

Four surface samples were obtained from the garage floor (soil) which were composited and analyzed for TPH. A TPH concentration of 4,400 mg/Kg was observed in this sample.

2.1.6 Area 6 (Garage Sump)

One sample was obtained with a power auger three feet below the surface adjacent to the sump in the garage. The sample was analyzed for TPH, CHC, and Pesticides. The sample was found to contain 480 mg/Kg TPH. All other analytes were below detection limits.

2.1.7 Area 7 (UST)

Four borings were advanced to a depth of 20 feet in the vicinity of the UST with a hollow-stem auger drill rig prior to tank removal. The borings were sampled at 5, 10, 15, and 20 feet. The four

samples were composited into one for each boring and analyzed for TPH and Total Lead. The highest TPH value observed was 1000 mg/Kg in boring B1, and Lead was found at concentrations as high as 19 mg/Kg in boring B4.

2.1.8 Area 8 (Office/Warehouse)

One soil sample was obtained from underneath this structure with a hand auger and analyzed for PNA and Pesticides. Pesticide results were 0.24 mg/Kg DDE, 2.0 mg/Kg DDT, and 0.8 mg/Kg Chlordane. Various PNA's were discovered as high as 30 mg/Kg and unknown semivolatile organics were observed at 400 mg/Kg. Only the DDT result exceeded TTLC limits (1.0 mg/Kg).

2.1.9 Area 9 (Loading Dock)

Three borings were advanced in the vicinity of the loading dock with a hollow-stem auger drill rig to a depth of 20 feet, sampled every five feet and composited as described previously. The composited samples were analyzed for TPH, BTEX, PNA, and pesticides. No analytes were found above detection limits.

2.1.10 Area 10 (Product Pipelines)

Surface and three-foot depth samples were obtained and composited from three locations adjacent to product pipelines near the office/warehouse structure. The three composite samples were analyzed for TPH, BTEX, PNA, and Pesticides. No analytes were discovered above detection limits.

2.1.11 Area 11 (Southeast Surface)

Three surface samples were obtained, composited and the composite analyzed for PNA, Pesticides, and CHC. The Pesticides detected were Dieldrin at 0.05 mg/Kg and Chlordane at 2.9 mg/Kg. PNA's and other hydrocarbons were also detected at low levels.

The Chlordane result exceeded TTLC limits (2.5 mg/Kg).

2.1.12 Area 12 (Northeast Surface)

Five samples were obtained in area 12 with a hand auger, three from the surface and two from a depth of three feet. All five samples were composited into one and analyzed for PNA and Pesticides. No analytes were discovered above detection limits.

2.1.13 Area 13 (Northwest Surface)

Six samples were obtained from Area 13 with a hand auger, three each from the surface and from a depth of three feet. The six samples were composited into one and analyzed for TPH, Pesticides, and CHC. TPH was observed at a concentration of 430 mg/Kg. All other analytes were below detection limits.

2.1.14 Summary of Initial Assessment

The garage (areas 5, 6, and 13), the underground tank (area 7), the warehouse (area 8), and the southeast corner (area 11) were found to contain levels of contaminants of sufficient concern to warrant further study. Table 3 summarizes the sampling protocols and results in these areas. The large gravel-covered parking area in the center of the property was not sampled during this initial investigative phase.

2.2 PHASE II ASSESSMENT

Based on these results, USPCI designed and implemented a second phase of sampling and analysis in August of 1989. In Area 11, Chlordane was detected at a concentration above TTLC limits in a surface composite sample. In order to establish the extent of contamination, four borings were advanced in this area with a hand auger to a depth of five feet with samples obtained at one-foot intervals. The upper three samples from each boring were analyzed for pesticides and the lower two held at the laboratory pending the results of the shallower samples. A similar strategy was employed in Area 13 where three five-foot borings were advanced and the samples analyzed for TPH.

Because the parking area was not previously sampled, four borings were advanced in this area with a hand auger and sampled and analyzed in the same manner as Areas 11 and 13. The upper three samples from each boring were analyzed for pesticides and TPH and two of the upper-most samples were selected for TTLC list analyses.

Areas 5, 6, and 8 were within or underneath structures that were to be demolished. Prior to demolition, surface contamination on the corrugated metal walls was assessed with wipe samples. Further investigation in areas 6 and 8 was delayed until demolition was completed. Further investigation of the UST (Area 7) was also conducted at this time. Soils in Area 5 were excavated without additional investigative sampling.

2.2.1 Area 11

In Area 11, IT reported the presence of Chlordane in the surface soil at a concentration of 2.9 mg/Kg, exceeding the TTLC threshold of 2.5 mg/Kg. Dieldrin was also detected at a concentration

TABLE 3 ANALYTICAL SUMMARY OF PHASE 1 INVESTIGATION RESULTS IN mg/Kg

REBULIS IN mg/Ng						
STUDY AREA	METHODOLOGY	RESULTS				
GARAGE AREA 5	COMPOSITE OF FOUR SURFACE SAMPLES	TPH 4400				
GARAGE AREA 6	ONE SAMPLE 3 FEET BELOW SURFACE	TPH 480				
GARAGE AREA 13	COMPOSITE OF SIX SURFACE SAMPLES	TPH 430				
UST AREA 7	FOUR BORINGS, EACH COMPOSITED 5-20 FEET	TPH 1000 (HIGHEST OF 4) LEAD 14-19				
WAREHOUSE AREA 8	ONE SURFACE SAMPLE	DDE 0.24 4,4' DDT 2.0 CHLORDANE 0.8 CHLORO-1N- BENZOTRI- AZOLE ISOMER 20 N (3-CHLORO- PHENYL) N,N- DIMETHAL UREA 10 MOLECULAR SULFUR 30 ALIPHATIC HYDROCARBONS 20 UNKNOWN PHTHALATE 30 UNKNOWN				
		SEMIVOLATILE ORGANICS 400				
SE CORNER AREA 11	COMPOSITE OF THREE SURFACE SAMPLES	DIELDRIN 0.05 CHLORDANE 2.9 METHYL PYRENE ISOMER 1.0 TOTAL ALIPHATIC HYDROCARBONS 100 TOTAL PNA 20 UNKNOWN SEMIVOLITILE ORGANICS 5				

of 0.05 mg/Kg, well under the TTLC threshold of 8.0 mg/Kg. The results of the USPCI sampling program for this area are summarized in Table 4. Only sample W11-1-1 taken from a depth of 0 - 1 foot had a detectable level of pesticides. This sample was found to contain 16 ug/Kg of DDT, well under the TTLC threshold of 1.0 mg/Kg. This data, when viewed with the IT data, indicates that the contamination is surficial and spotty.

2.2.2 Area 13

In Area 13, IT documented a TPH concentration of 430 mg/Kg. The results of the USPCI program are displayed in Table 5. The highest soil concentration found was 40 mg/Kg. Although no published criterion exists for TPH, 1000 mg/Kg is generally used to define hazardous levels. All results obtained in this assessment are well below this level. It is possible that the IT composite included material from an old spill area.

2.2.3 Parking Area

The pesticide and TPH results for the parking area are summarized in Table 6. Pesticides were detected only in samples taken from the upper foot of the borings, and all detected pesticide concentrations were below TTLC threshold values. Two sample concentrations exceeded 100 mg/Kg for TPH; 110 mg/Kg in the 2'-3' sample in boring WP-1, and 130 mg/Kg in the 0'-1' sample from boring WP-4. These concentrations should not dictate soil removal.

Two samples from the parking area were analyzed for the entire TTLC list. One of these samples was collected from the surface (WP-1-1) and one from the 1'-2' depth range (WP-2-2). The first sample, WP-1-1, was taken in an oil-stained area in an attempt to sample worst-case conditions. Both samples contained TTLC list inorganics at concentrations well below action levels. The only TTLC list organic compounds detected were Chlordane, DDT and DDE in sample WP-1-1 at concentrations of 73, 21, and 12 ug/Kg, respectively. These levels are well below the action levels of 2.5 mg/Kg for Chlordane and 1.0 mg/Kg for DDT and DDE. No remedial action is required in the parking area.

2.2.4 Wipe Samples

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Four wipe samples were obtained to determine if the metal building interior surfaces were contaminated with pesticides. Three wipes were collected in the warehouse and one in the garage. The only detected pesticide in all of the wipe analyses was 0.2 ug/100 cm² 4,4' DDT in WIPE-3 taken from the center of the north interior warehouse wall. This level does not effect the demolition of the structures or the debris solid waste designation.

	TABLE 4 AREA 11 PESTICIDE RESULTS IN ug/Kg							
SAMPLE	DEPTH	BORING W11-1	BORING W11-2	BORING W11-3	BORING W11-4			
1	0-1 FOOT	DDT 16	ND	ND	ND			
2	1-2 FEET	ND	ND	ND	ND			
3	2-3 FEET	ND	ND	ND	ND			
4	3-4 FEET	NA	NA	NA	NA			
5	4-5 FEET	NA	NA	NA	NA			
NA N	NA NOT ANALYZED ND NOT DETECTED							

	AREA	TABLE 5					
SAMPLE	DEPTH	BORING W13-1	BORING W13-2	BORING W13-3			
1	0-1 FOOT	40	40	40			
2	1-2 FEET	4	ND	7			
3	2-3 FEET	ND	3	23			
4	3-4 FEET	NA	NA	NA			
5	4-5 FEET	NA	NA	NA			
NA NO	NA NOT ANALYZED ND NOT DETECTED						

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TABLE 6 PARKING AREA PESTICIDE RESULTS IN ug/Kg TPH RESULTS IN mg/Kg

SAMPLE	DEPTH	BORING WP-1	BORING WP-2	BORING WP-3	BORING WP-4		
1	0-1 FOOT	CHLORDANE 73 DDT 21 TPH ND	CHLORDANE 68 DDT 22 DDE 12 TPH 36	CHLORDANE 230 DDT 22 DDE 12 TPH 33	METHOXY- CHLOR 16 TPH 130		
2	1-2 FEET	PESTICIDE ND TPH 6	PESTICIDE ND TPH ND	PESTICIDE ND TPH ND	PESTICIDE ND TPH ND		
3	2-3 FEET	PESTICIDE ND TPH 110	PESTICIDE ND TPH 4	PESTICIDE ND TPH ND	PESTICIDE ND TPH 5		
4	3-4 FEET	PESTICIDE NA TPH 10	PESTICIDE ND TPH 3	NA	NA		
5	4-5 FEET	PESTICIDE NA TPH 13	NA	NA	NA		
ND NO							

2.2.5 Area 8

After removal of the roof and walls of the warehouse, the wood floor and soils beneath the floor were sampled and analyzed for TPH and pesticides. Figure 3 displays the elevated floor and the locations where the samples were obtained. The soil samples were obtained through the floor after samples of the flooring material were removed. The results are summarized in Table 7.

TPH and pesticides were detected in all samples, with DDT exceeding the TTLC threshold 1.0 mg/Kg) in 6 wood samples and 5 soil samples. Because two soil samples contained TTLC levels of Lindane above the EP-TOX limit (0.4 mg/kg), and the material was destined for disposal out side of California, EP-TOX analysis for Lindane was performed on these two samples to determine if the soils required classification as a RCRA Characteristic Waste (D013). No Lindane was detected in the leachate. However, because of the pesticide levels all material, including the TPH contaminated material, was classified as U-129 listed waste.

2.2.6 Areas 6 and 7

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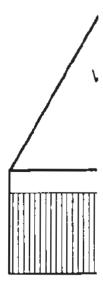
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Prior to the removal of the Garage Sump (Area 6) and the UST (Area 7) USPCI contracted Hunter/Gregg Environmental Services, Inc. to perform drilling, sampling, and analytical services at these locations. Two borings were advanced at each location to a depth of 40 feet. Samples were obtained at depths of 5, 10, 15, 20, 30, and 40 feet from each boring. The samples were analyzed for TPH by EPA methods 8015 and 418.1 and for BTEX by EPA method 8020. The only result above detection limits was a sample from a depth of five feet adjacent to the garage sump with a TPH value of 30 mg/Kg. The Hunter/Gregg report is enclosed in Appendix 2 of this report.

3. REMEDIATION

The remediation of the PWC site was performed in two distinct phases: Phase I) demolition and removal of non-hazardous materials, and Phase II) removal of hazardous materials. The goals of the remediation were to remove all TTLC listed compounds to below their listed values and rmove TPH contaminated materials to below 200 mg/Kg. A sampling event at the end of Phase I confirmed the suspected hazardous nature of the warehouse flooring and subsoils. Verification sampling was performed throughout Phase II to confirm removal. This process resulted in additional removal of material thus confirming that all identified wastes were removed. Finally the site was leveled and brought back to approximate original grade by the addition of clean backfill.





LEGEND

- O SAMPLE LOCATION
- D DIRT
- W WOOD

PRESTON WEED CONTROL SITE WHITTIER CALIFORNIA

FIGURE 3

TAL PETROLEUM HYDROCARBONS
AND DDT SAMPLING LOCATIONS

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TABLE 7 AREA 8 -- PESTICIDE AND TPH ANALYTICAL SUMMARY PESTICIDES REPORTED IN ug/Kg TPH REPORTED IN mg/Kg

TPH REPORTED IN mg/kg						
LOCATION	WOOD FLOOR RESULTS	SOIL RESULTS				
W1/D1	TPH 13700 LINDANE20.0 DDE 64.4 DDT 1820 METHOXYCHLOR1890	TPH 3610 LINDANE 98.4 DDT 1840				
W2/D2	TPH 19000 DDT 8039	TPH 7810 LINDANE 953 EPTOX LINDANE ND DDT 421				
W3/D3	TPH 2140 DDT 1120 METHOXYCHLOR 306	TPH 29700 LINDANE 1460 EPTOX LINDANE ND DDT 6570				
W4/D4	TPH 1430 DDT 725 METHOXYCHLOR 429	TPH 9039 DDT 261				
W5/D5	TPH 2300 DDT 336	TPH 13400 DDT 1390				
W6/D6	TPH 1005 DDT 1.5	TPH 8670 DDT 327				
W7/D8	TPH 5012 DDE 68.8 DDT 1680	TPH 12000 DDE 94.1 DDT 856				
W8/D9	TPH 4800 DDE 17.5 DDT 377	TPH 26600 DDT 1850				
W9/D10	TPH 9051 LINDANE 155 DDT 2870 METHOXYCHLOR 839	TPH 19300 DDT 378				
W10/D11	TPH 2450 DDT 2028	TPH 19400 DDT 1305				

3.1 Phase I Removal of Non-Hazardous Material

This phase consisted of demolition of all aboveground structures including the 20,000 gallon aboveground storage tank and the underground lines. Figure 4 shows the areas on site where this activity took place. Work began on Phase I in November 1989 and was completed in December 1989, lasting approximately two weeks. Specific activity for each area is described below.

3.1.1 Area 1

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The tank farm remediation began with pressure washing the 20,000 gallon aboveground storage tank until visually clean. Approximately five hundred (500) gallons of liquid (mixed oil and water) were pumped into drums from the tank after cleaning. This mixture was unsuitable for recycling and was shipped to USPCI's Grassy Mountain facility for blending in the kiln fuel program. The tank was loaded on a flatbed truck and transported to AMR metals recycling in Ontario, California where it was rendered as scrap. The concrete retaining walls, and tank pads, were demolished and shipped to the Puente Hills landfill, a class III landfill, in Puente Hills, California for disposal. No evidence of leakage (staining, odors, etc.) was observed in Area 1 during or after the removal action.

3.1.2 Area 2

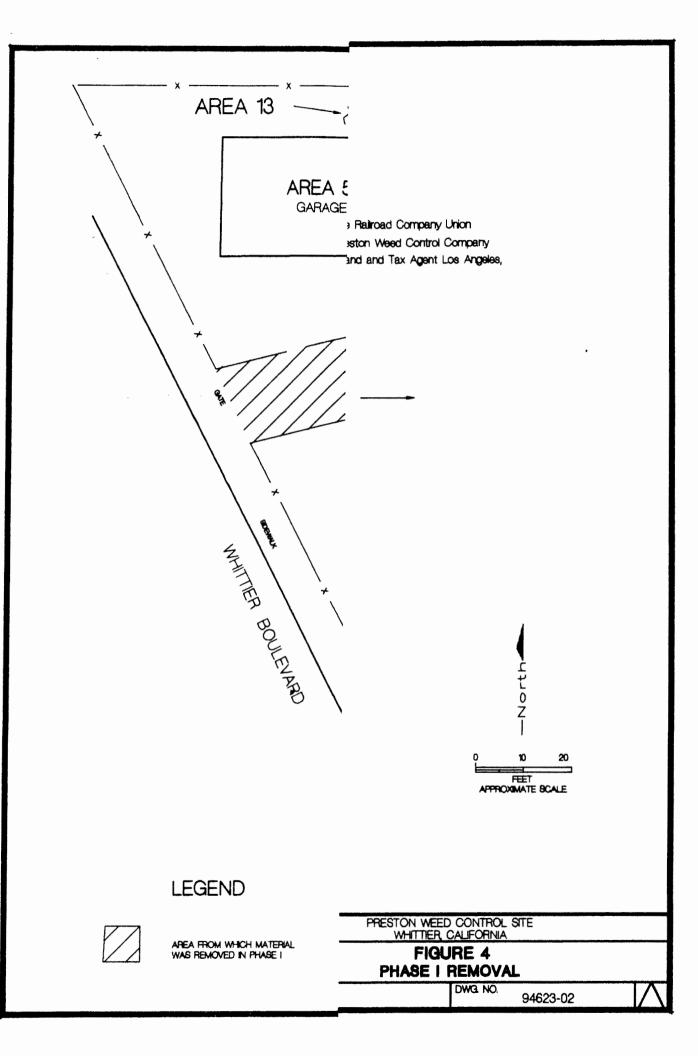
The sump in the tank farm area was demolished and removed. This debris was transported to the Puente Hills landfill. IT's assessment of the soils adjacent to the sump indicated no hydrocarbons, Polynuclear Aromatic Hydrocarbons (PNAs) or pesticides. No evidence of contamination was observed during the remediation.

3.1.3 Area 3

The pump station adjacent to the tank farm was demolished and removed. Analytical results from samples obtained from borings surrounding the station did not indicate any contamination. The debris was also shipped to Puente Hills landfill.

3.1.4 Area 4

This concrete pad (old building foundation?) was demolished and removed. A composite sample from the pad and surrounding soils to a depth of three feet indicated no hydrocarbons, PAHs, or pesticides. The debris was shipped to the Puente Hills landfill for disposal.



3.1.5 Area 5

The aboveground structure of the garage was demolished and removed. Wipe samples from the structure indicated no pesticides. The debris was shipped to Puente Hills landfill for disposal.

3.1.6 Area 8

The aboveground structure of the office/warehouse was demolished and removed. Wipe samples from this corrugated steel building had revealed no pesticide contamination. The wood flooring and soil beneath was left until Phase II. This debris was also shipped to the Puente Hills landfill.

3.1.7 Area 10

The underground product lines were removed in this phase as the assessment had revealed no associated soil contamination. The pipes themselves were handled as hazardous waste and shipped to USPCI's Grassy Mountain facility for disposal. No evidence of leakage was observed during the product lines removal.

3.1.8 Area 11

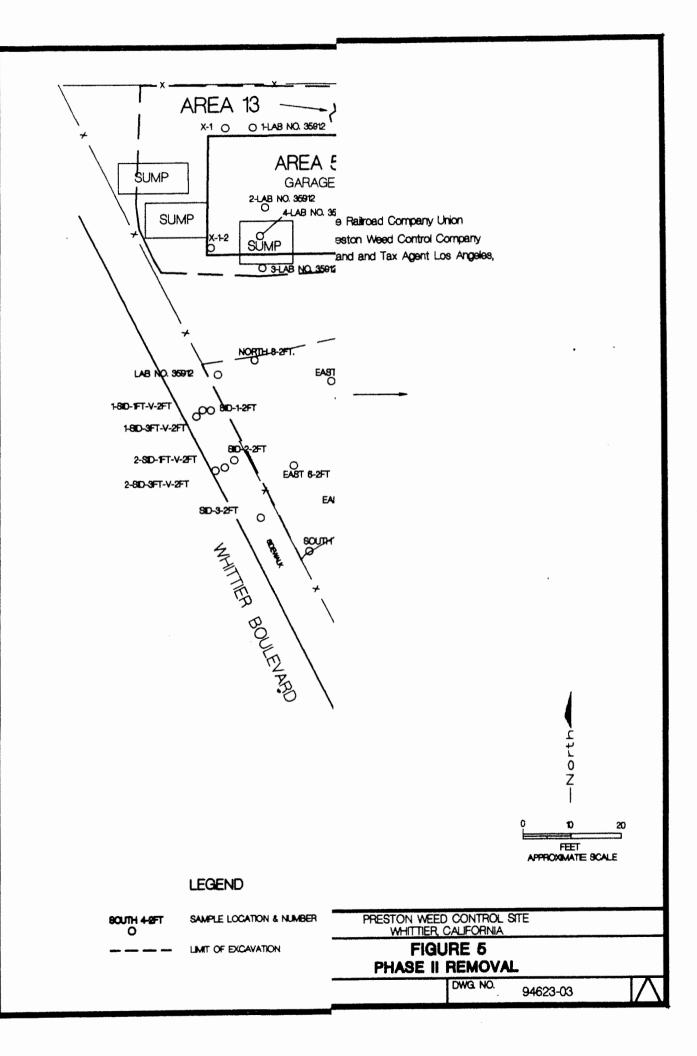
The concrete pad in the southeast corner of the site was demolished and removed. The debris was shipped to the Puente Hills landfill for disposal. Chlordane contaminated soil was removed in Phase II.

3.1.9 Parking Area

The concrete pad that extended from the site entrance to the office/warehouse building was demolished and removed. This debris was also shipped to Puente Hills landfill for disposal. Old product lines were discovered beneath this concrete which extended to the loading dock area. These lines were removed and shipped to Grassy Mountain for disposal. No evidence of contamination was observed during this removal action.

3.2 Phase II Removal of Hazardous Waste

Phase II consisted of removal of the identified hazardous waste at the PWC site. Several areas containing hazardous waste were discovered during Phase I including DDT contaminated flooring and subsoils in the warehouse, TPH contaminated concrete in three newly discovered sumps, and TPH contaminated soils near the site north gate. In addition previously identified material was removed from Areas 5, 6, 7, and 13. Figure 5 shows those areas which were remediated during this phase as well as the location of all verification samples. All verification sample results can be found in



Appendix 1. This work began in February 1990 and was completed May 23, 1990. Approximately 950 tons of material were removed during this phase of the remediation. All hazardous material removed was disposed of at USPCI's Grassy Mountain Facility, a RCRA-approved hazardous waste treatment and disposal facility located in Toole County, Utah.

3.2.1 Areas 5, 6, and 13

The concrete floor and sumps in the garage were contaminated with TPH. This concrete was demolished and shipped to USPCI's Grassy Mountain facility for disposal. Three additional sumps were found in the garage area and were included in this removal. A soil sample collected beneath the Area 6 sump contained a TPH concentration of 478 mg/kg, and heavy staining was observed after concrete removal extending northward to Area 13. Additional soil was then removed from beneath all of Areas 5 and 6, and parts of 13. Final verification soil samples (see Table 8) indicated low residual TPH values. Approximately 200 tons of soil and debris were removed from these areas.

TABLE 8 VERIFICATION SAMPLES AREAS 5, 6, AND 13		
Sample No.	TPH (mg/Kg)	
#1	13	
#2	14	
#4	10	
X-1-2	132	
X-2-2	164	
X-1	8.5	
X-2	43.5	

3.2.2 Area 7

The underground storage tank was triple rinsed, excavated and removed on March 12, 1990. During excavation activities soil/air monitoring was performed as required by the South Coast Air Quality

Management District (SCAQMD). No organic vapors concentrations exceeding SCAQMD limits were detected. The tank was in good condition with no obvious holes. Approximately 20 yards of contaminated soil (probably related to overfill or spills) were removed from the hole and shipped along with the tank to USPCI's Grassy Mountain facility for disposal. Environmental Science & Engineering (ESE) observed the tank removal and collected two samples from the tank excavation. These samples were analyzed for TPH and BTEX with results presented in Table 9. The results confirm that soil was sufficiently remediated and a clean tank closure was achieved. ESE's report is included in Appendix 2.

TABLE 9 AREA 7 SOIL SAMPLES COLLECTED BELOW THE UST (mg/Kg)					
Sample No. TPH Benzene Toluene Ethylbenzene					Xylene
1	19	ND < 0.05	0.1	ND<0.1	1.0
2	ND < 1 0	ND < 0.05	ND < 0.05	ND < 0.1	ND < 0.1

3.2.3 Area 8

The wooden floor of the warehouse and soil beneath were found to contain DDE, lindane, methoxychlor, and TPH (reference Figure 3 and Table 7 of this report). This flooring and soil was removed and shipped to USPCI's Grassy Mountain facility as U-129 listed waste for disposal. Five hundred and twenty-seven (527) cubic yards of soil and debris were removed from this area. A verification sampling grid (Figure 5) was placed over Area 8 and samples collected and analyzed for TPH and the pesticides identified previously in each sampled area. In the northern half of Area 8, DDT was the only pesticide detected. Therefore, in the verification samples from the northern half, DDT was the only pesticide quantified in the analysis. As the results presented in Table 10 show, one sample, UP-20, contained a TPH concentration of 7,600 mg/kg. An additional ten (10) yards of soil were removed from this area and another sample collected. This sample, UP20-2, has a TPH concentration of 11.3 mg/kg. The samples verified that DDT and TPH contaminated soil was removed from Area 8.

3.2.4 Area 11

Initial assessment revealed a single soil surface sample that contained chlordane in excess of California TTLC standards. Four (4) yards of soil were removed from this area and shipped to USPCI's Grassy Mountain facility for disposal. A verification sample W-11-2 contained no detectable chlordane.

Table 10 Area 8 Soil Sample Results (mg/Kg)						
N	orth Sample	:S		South Sampl	les	
Sample	TPH	DDT	Sample	TPH	Pesticides	
UP-20	7,600	<0.2	PW1	16.3	ND	
UP-21	5.6	<0.02	PW2	29.0	ND	
UP-22	34.3	<0.02	PW3	9.6	ND	
UP-23	<1	<0.02	PW4	15.8	ND	
UP-24	3.9	<0.02	PW5	<1	ND	
UP-25	9.8	<0.02	PW6	<1	ND	
UP-26	5.8	<0.05	PW7	<1	ND	
UP-27	5.8	<0.05	PW8	<1	ND	
UP-28	30.3	<0.05	PW9	44.0	ND	
UP-20-2	11.3	NA				

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3.2.5 North Gate Area

During construction of the vehicle decontamination facility in the North Gate Area a soil with heavy hydrocarbon staining was observed. Sample analysis revealed a TPH concentration of 2,927 mg/kg. One hundred and twenty (120) yards of soil were removed and the four sides of the excavation were sampled. Two samples from the east side of the excavation contained TPH concentrations of 2,660 and 1,840 mg/kg. An additional seventy five (75) yards of soil was removed from this area. Additional samples indicated TPH concentrations of 2.2 mg/kg. The west side samples gave some indication that the soil beneath the sidewalk might be impacted; therefore, horizontal borings were made to determine the extent of this contamination. These samples were collected at one and three feet horizontally beneath the sidewalk. Results indicate TPH levels ranging from 2.1 to 10.2 mg/kg beneath the sidewalk. The verification sample results are presented in Table 11. The bottom-9 sample has TPH concentration of 364 mg/kg. This sample was collected at a depth four (4) feet below grade. After backfill, risk of exposure to the public is minimal. Also, borings on site indicate that the site is under-lain by clay to 40 ft. and no groundwater was encountered at that depth. Therefore, this isolated contaminated area sampled at this concentration should pose no threat to groundwater.

TABLE 11 VERIFICATION SAMPLES/NORTH GATE AREA				
Sample No.	TPH (mg/kg)			
1-Sld-1ft-V-2ft	5.4			
1-Sid-3ft-V-2ft	10.2			
2-Sid-1ft-V-2ft	2.5			
2-Sid-3ft-V-2ft	6.1			
East 6-2-2ft	2.2			
East 7-2-2ft	2.2			
Bottom 9	364			
North-8-2ft	146			
South-4-2ft	8.3			
East-5-2ft	16.1			
Sld-3-2ft	1.3			

TABLE 12 MATERIAL DISPOSAL SUMMARY

PHASE I					
LOCATION	MATERIAL	DESTINATION			
AREA 1	500 GAL. OIL/WATER 20,000 GAL. TANK CONCRETE DEBRIS	GRASSY MT., UT AMR RECYCLING PUENTE HILLS, CA			
AREA 2	CONCRETE SUMP	PUENTE HILLS, CA			
AREA 3	PUMP STATION DEBRIS	PUENTE HILLS, CA			
AREA 4	CONCRETE PAD	PUENTE HILLS, CA			
AREA 5	GARAGE SUPERSTRUCTURE	PUENTE HILLS, CA			
AREA 8	WAREHOUSE SUPERSTRUCTURE	PUENTE HILLS, CA			
AREA 10	UNDERGROUND PRODUCT LINES	GRASSY MT., UT			
AREA 11	CONCRETE PAD	PUENTE HILLS, CA			
PARKING AREA	CONCRETE PAD UNDERGROUND PRODUCT LINES	PUENTE HILLS, CA GRASSY MT., UT			
PHASE II					
LOCATION	MATERIAL	DESTINATION			
AREAS 5, 6, 13	200 TONS, SOIL AND DEBRIS	GRASSY MT., UT			
AREA 7	20 CUBIC YARDS SOIL	GRASSY MT., UT			
AREA 8	537 CUBIC YARDS SOIL AND DEBRIS	GRASSY MT., UT			
AREA 11	4 CUBIC YARDS SOIL	GRASSY MT., UT			
NORTH GATE	195 CUBIC YARDS SOIL	GRASSY MT., UT			

4.0 CONCLUSIONS

The Preston Weed Control site has been the subject of two phases of investigation and two phases of remediation. The following actions were taken:

- removal and disposal of 175 tons of nonhazardous debris consisting of the aboveground structures;
- 2) removal and scrapping of the aboveground storage tank;
- removal and disposal of various hazardous wastes consisting of building substructures and soils (approximately 950 yards) contaminated with pesticides and petroleum hydrocarbons;
 and
- 4) removal and disposal of the underground storage tank.

During all phases of work on this site, both investigative and remedial, wherever suspect materials were encountered they were sampled and analyzed. This resulted in additional removal of materials from the site. Verification samples were collected in all areas where hazardous wastes were removed to confirm removal.

Pesticide verification sampling and analyses in the warehouse (Area 8) and in Area 11 indicate the pesticide contaminated soils were removed in these areas. Total Petroleum Hydrocarbon (TPH) analyses in several areas of the site (Areas 5, 6, 7, 13 and the North Gate Area) indicate that the hydrocarbon contaminated soil was removed. Low concentrations (132, 164, 364 mg/Kg) of TPH were found in three verification samples at the site. The exposure risk from these soils is low because they are at depths that isolate them from the surface, eliminating human contact and surface water contamination. The groundwater is at depths greater than forty feet in a soil that is predominantly clay, and the concentrations are low enough to not be a significant source for migration.

A considerable amount of environmental restoration has been performed at the PWC site to date and all analytical results support the conclusion that site hazards have been identified and removed; however, undetected conditions may exist at the site. This is primarily due to the lack of historical operational information for the facility. Additionally, any sampling program can fail to detect small areas of contamination, and should be designed to balance the risk of undetected contamination with the cost of excessive sampling and analysis. The extent of sampling at PWC, both assessment and verification, indicates that any remaining contamination is of very limited extent and should not pose a threat to human health or the environment.

Boar Customer. This Bulleon continue important investmental leadth and toccategy information for your ampleyers who recently propried the product. Please make they intermediate is given to them. If you result the product, this Bulleon should be given to the Buyer. This Form may be considered auditors introduced.

Chevron U S A Inc

Material Safety Data Sheet

Prepared According to the OSHA Hazard Communication Standard (29 CFR 1910.1200). (Formerly Colled MATERIAL INFORMATION BULLETIN)



CHEVRON Need Oil

CPS 276506

CAUTION!

HARMFUL OR PATAL IF SNALLOWED

COMBUSTIBLE

KEEP OUT OF REACH OF CHILDREN

TYPICAL COMPOSITION

Light catalytically-cracked distillate (CAS 64741-59-9)

Emulsifier

>99%

EXPOSURE STANDARD

No Federal OSHA exposure standard or ACGIH TLV has been established for this material. However, due to possible carcinogenic effect, exposure should be reduced to the lowest feasible level.

PHYSIOLOGICAL & HEALTH EFFECTS

EMERGENCY & FIRST AID PROCEDURES

Lyes

Expected to cause no more than minor eye irritation.

Flush eyes immediately with fresh water for at least 15 minutes while holding the eyelids open. If irritation persists, see a doctor.

Skin

Prolonged or frequently repeated contact may cause skin irritation or may cause the skin to become cracked or dry from the defatting action of this material. See Additional Health Data.

Remove contaminated clothing.

Inhalation

Breathing the vapor may be irritating to the respiratory tract and can cause central nervous system effects. See Additional Health Data. If respiratory irritation or any signs or symptoms as described in this bulletin occur, move the person to fresh air. If any of these effects continue, see a doctor.

Ingestion

Not expected to have acute systemic toxicity by ingestion. Note to Physician: Ingestion of this product or subsequent vomiting can result in aspiration of light hydrocarbon liquid which can cause pneumonitis.

If swallowed, give water or milk to drink and telephone for medical advice. DO NOT make person vomit unless directed to do so by medical personnel. If medical advice cannot be obtained, then take the person and product container to the nearest medical emergency treatment center or hospital.

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See Page 3.

SPECIAL PROTECTIVE INFORMATION

Sye Protection: No special eye protection
is necessary.

Skin Protection: Avoid prolonged or frequently repeated skin contact with this material. Skin contact can be minimized by wearing impervious protective clothing including rubber gloves.

Respiratory Protection: If operating conditions result in airborne mists or vapors of this material, the use of an approved respirator is recommended.

Ventilation: Use this material only in well ventilated areas.

FIRE PROTECTION

Liquid evaporates and forms vapor (fumes) which can catch fire and burn with explosive violence. Invisible vapor spreads easily and can be set on fire by many sources such as pilot lights, welding equipment, and electrical motors and switches. Fire hazard is greater as liquid temperature rises above 85°F.

Flash Point: (PM)150°F(66°C) Min.

Autoignition Temp.: 260°C

Flammability Limits: 1.0-6.0%

Extinguishing Media: CO_2 , Dry Chemical, Foam, Water Fog.

Special Fire Fighting Procedures: For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus. See Hazardous Decomposition Products. Read the entire MSDS.

SPECIAL PRECAUTIONS

See Page 3.

Environmental Impact: This material is not expected to present any environmental problems other than those associated with oil spills. For help with any spill, leak, fire, or exposure involving this material, call day or night (415)233-3737.

Precautions if Material is Released or Spilled: Eliminate all open flame vicinity of spill or released vapor. Stop the source of the leak or release. up releases as soon as possible, observing Protective precautions in Special . Information. Contain liquid to prevent further contamination of soil, water or groundwater. Clean up spills using appropriate techniques such as sorbent materials or pumping. feasible and appropriate, contaminated soil. Follow prescribed procedures for reporting and responding to larger releases.

Waste Disposal Methods: Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations. Contact local environmental or health authorities for approved disposal of this material.

REACTIVITY DATA

Stability (Thermal, Light, etc.): Stable. Incompatibility (Materials to Avoid): May react with strong oxidizing materials. Mazardous Decomposition Products: Normal combustion forms carbon dioxide and water vapor and may produce oxides of sulfur; incomplete combustion can produce carbon monoxide.

Hazardous Polymerization: Will not occur.

PHYSICAL PROPERTIES

See Page 3.

The above information is based on data of which we are aware and is believed to be correct as of the data hereof. Since the information contained herein may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the data hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

Material Safety Data Sheet

CHEVRON Weed 011 CPS 276506

ADDITIONAL HEALTH DATA

Signs and symptoms of central nervous system effects may include one or more of the following: headache, dizziness, loss of appetite, weakness and loss of coordination. Affected persons usually experience complete recovery when removed from the exposure area.

This material is of varying composition and may contain significant amounts of polynuclear aromatic hydrocarbons (PNAs) which have been shown to cause skin cancer after prolonged or frequent contact with the skin of test animals. When a similar material was repeatedly applied to the skin of mice, there was a moderate increase in skin cancer. We strongly recommend that the precautions outlined in this MSDS be followed to reduce skin contact and inhalation of mists or vapors to a minimum.

SPECIAL PRECAUTIONS

READ AND OBSERVE ALL PRECAUTIONS ON PRODUCT LABEL.

DO NOT USE OR STORE near flame, sparks or hot surfaces. USE ONLY IN WELL VENTILATED AREA. Keep container closed.

DO NOT weld, heat or drill container. Replace cap or bung. Emptied container still contains hazardous or explosive vapor or liquid.

CAUTION! Do not use pressure to empty drum or explosion may result.

PHYSICAL PROPERTIES

Solubility: Miscible with hydrocarbon solvents; emulsifies with water. Appearance (Color, Odor, etc.): Amber liquid.
Boiling Point: 180-343°C
Melting Point: n/a
Specific Gravity: 0.89 @ 15.6/15.6°C (Min.)
Vapor Pressure: <1 mm Hg @ 25°C
Vapor Density (Air=1): NDA
Percent Volatile (Volume %): NDA
Evaporation: NDA
Viscosity: 2.5 cSt @ 40°C

n/a = Not Applicable
NDA = No Data Available

MAT_RIAL SAFETY DATA HEET

FCC LIGHT CYCLE OIL

MSDS No.

15/24/45



ARCO PETROLEUM PRODUCTS COMPANY DIVISION OF ATLANTIC RICHFIELD COMPANY 515 SOUTH FLOWER STREET LOS ANGELES, CALIFORNIA 90071 IMPORTANT: Read this MSDS before handling and disposing of this product and pass this information on to employees, oustomers, and users of this product is considered a hazardous substence under the OSHA Hazard Communication Rule.

I.	y was	Gener	al distribution		
Trade Name	FCC LIGHT CYCLE DI	FCC LIGHT CYCLE DIL			
Other Nam	PER PROPERTY OF STREET OF		\$00/424-9300 CHEMTREC 213/484-5151 LA POISON CUSTOMER SERVICE 213/486-8258 INFO ONLY		
Chemical Family	PETROLEUM HYDROCAR	BONS		Ous Materials Proper Shipping Name M DISTILLATE	
Generic Na	me Light Catalytic CR	ACKED DISTILLATE	DOT Hazard COMBUSTI	Class BLE LIQUID	
CAS No.	64741-59-9*	Company ID No. 103162066	39	UN/NA ID No. UN 1268	
1L	DANGER	Summary of	Hazards		
1	MAY BE HARMFUL IF ABS AVOID PROLONGED WASH THOROUGHLY MAY CAUSE MILD EYE IR AVOID CONTACT WI CONTAINS PETROLEUM DO WILL CAUSE CHEMIO MAY BE HARMFUL IF INHO MODERATELY COMBUSTIBLE AVOID THE "SWITCH CONTAINS 4- TO 8- MI	RITATION! TH LIQUID AND/OR VAPORS. STILLATES! NOT INDUCE VONITING SIN CAL PNEUMONIA. OBTAIN P ALED! (SEE SECTIONS IV. E! OSHA/NFPA CLASS IIIA	ICE ASPIRATION PROMPT MEDICAL A COMBUSTIBLE SECTION XI.	L ATTENTION. LIQUID.) DCARBONS!	
H1.		Fire and Exp	plosion		
lash Point	(Method)	Autoignition Temperatu	re (Method)	Flemmable Limits (% Vol. in Air)	

111.				CXPIGSIGE			
Flash	Point (Method)		Autoignition Tem	perature (Metho	d) Flammab At Norm	le Limits (% Vol. in A al Atmospheric Tem	(ir) operature and Pressu
AP	160° F	(D-92)	AP 500'	F (EST.) Lower		
SEE	FIRE & EXPLOSION	HAZARDS"	BASED UPON	"FUEL DIL NO.	. 2" BASE	ED UPON 'FUEL	OIL NO. 2*

MODERATELY COMBUSTIBLE! WHEN HEATED ABOVE THE FLASH POINT, THIS MATERIAL Fire and Will Release Flammable vapors which if exposed to an ignition source can burn in the Open or be explosive in confined spaces. Mists or sprays may be flammable at temperatures below the normal flash point.

FOR "SWITCH LOADING" PROCEDURES, SEE SECTION XI.

Extinguishing Media

DRY CHEMICAL, HALON, AND CARBON DIOXIDE. FOAM AND WATER FOG ARE EFFECTIVE BUT MAY CAUSE FROTHING.

Special Firefighting Procedures

FOR FIRES INVOLVING THIS MATERIAL. DO NOT ENTER ANY ENCLOSED OR CONFINED FIRE SPACE WITHOUT PROPER PROTECTIVE EQUIPMENT. THIS MAY INCLUDE SELF-CONTAINED BREATHING APPARATUS TO PROTECT AGAINST THE HAZARDOUS EFFECTS OF COMBUSTION PRODUCTS AND OXYGEN DEFICIENCES. COOL TANKS AND CONTAINERS EXPOSED TO FIRE WITH WATER.

IV.			Health Hazard	16 🔆 🧃			
Summary of Acute Hazarda			RITATE EYES. INHALA ON INTO LUNGS WILL				
ROUTE OF E	XPOSURE		SIGNS AND SYMPTO	MS			Primary Route(s)
Inhalation			PTOMS OF CENTRAL NE AND TIME OF EXPOSUR		YSTEM DEF	RESSION	· 🖸
Eye Contact	MILD EYE IRR VAPORS.	ITATION MAY RES	ULT FROM CONTACT W	TH LIQU	ID, MIST.	AND/OR	X
Skin Absorption			D CONTACT WITH LARG MAY DCCUR AND PROD				X
Skin Irritation	PROLONGED OR	REPEATED SKIN	MATERIAL IS NOT EX CONTACT MAY RESULT EE "SUMMARY OF CHRO	IN IRRI	TATION OF	MORE	
Ingestion			JSEA, VOMITING, DIA N INTO THE LUNGS WI				
and	ANALYTICAL RE BOF 4- TD 6-ME THIS TYPE CAN AND REPEATED PERSONNEL WIT	ESULTS SHOW THAT EMBERED CONDENSE N INDUCE SKIN TU CONTACT. MINIM	ESTED IN LONG-TERM IT IS LIKELY TO C ED-RING AROMATIC HY UMORS ON LABORATORY HIZE EMPLOYEE EXPOS SKIN DISOROERS OR ES PRODUCT.	ONTAIN DROCARS ANIMAL URE!	BETWEEN CONS. SOME S FOLLOWS	COMPOUNDS OF NG PROLONGED	·
V.	Protective	Equipment	and Other Co	ntrol l	Vieasui	98	
Respiratory	ITS LOW VAPOR	PRESSURE. BUT	D TO PRESENT A RES . IF EXCESSIVE MIS ER NIOSH/MSHA-APPR	T OR VA	PORS RESL	LT FROM	
iye		IQUID. CONTACT	N WHENEVER THERE I LENSES SHOULD NOT				
ikin	OF USE MAKE S	IGNIFICANT CONT	TED SKIN CONTACT. ACT LIKELY, CLEAN , AND FACIAL PROTE	AND IMP	ERVIDUS C	LOTHING	
ngineering ontrols			KEEP VAPOR CONCENT MITS (SEE SECTIONS			MATERIAL	_
ther Hygienic	OR USE OF TOIL HARSH ABRASIVE AFTER WORK IF	LET FACILITIES. E SKIN GLEANERS GENERAL CONTAC E REUSE. LAUNO	AP AND WATER BEFOR DO NOT USE GASOL FOR WASHING EXPOS T DCCURS. REMOVE ER OR DISCARD CONT	INE, SOI ED SKIN OIL-SOAI	LVENTS, K AREAS. KED CLOTH	EROSENE, OR Take a shower Ing and	
1.		Occupa	itlonal Exposu	re Lin	ilts		
bstance			Source	Date	Туре	Value/Units	Time
KEROSENE (D	HEW PUB. 77-19	2) SEE SECT. X	I NIOSH	1877	TVA	100 MG/M3	10 HRS
	NE SOLUBLES) S	SEE SECTION XI.	ACGIH Osha Acgih/Osha	1985 1985 1985	STEL TLV PEL TLV STEL	1800 MG/M3 0.2 MG/M3 0.2 MG/M3 5 MG/M3 10 MG/M3	8 HRS 8 HRS

FCC LIGHT CYCLE DIL

MSDS No. APPC 860 Rev. Date 10/24/85

VII.	Emergency and First Ald				
Inhalation	REMOVE PERSONNEL FROM CONTAMINATED AREA TO FRESH AIR. FOR RESPIRATORY DISTRESS, GIVE AIR, DXYGEN, OR ADMINISTER CPR (CARDIOPULMONARY RESUSCITATION), IF NECESSARY. OBTAIN MEDICAL ATTENTION IF BREATHING DIFFICULTIES CONTINUE.				
Eye Contact	FLUSH WITH CLEAN LOW-PRESSURE WATER FOR AT LEAST 15 MINUTES. IF IRRITATION PERSISTS, OBTAIN MEDICAL ATTENTION.				
Skin Contact	PROMPTLY REMOVE CONTAMINATED CLOTHING AND THOROUGHLY CLEAN BEFORE REUSE. CLEAN OR DISCARD CONTAMINATED LEATHER GOODS. THROUGHLY WASH AFFECTED SKIN WITH SOAP AND WATER.				
Ingestion	DO NOT INDUCE VOMITING, SINCE ASPIRATION INTO THE LUNGS WILL CAUSE CHEMICAL PNEUMONIA. IF ASPIRATION OCCURS, PROMPTLY OBTAIN MEDICAL ATTENTION.				
Emergency Medical Treatment Procedures	SEE ABOVE PROCEDURES				
VIII.	Spill and Disposal				
Precautions f Material s Spilled or Released	CONTAIN SPILL. REMOVE ALL IGNITION SOURCES AND SAFELY STOP FLOW OF SPILL. SPILL MAY CREATE SLIPPING HAZARDS. PREVENT FROM ENTERING ALL WATER BODIES, IF POSSIBLE. EVACUATE ALL NON-ESSENTIAL PERSONNEL. IN URBAN AREAS, CLEANUP AS SOON AS POSSIBLE; IN NATURAL ENVIRONMENTS, CLEANUP ON ADVICE FROM ECOLOGISTS. THIS MATERIAL WILL FLOAT ON WATER. ABSORBANT MATERIAL AND PADS CAN BE USED. COMPLY WITH ALL APPLICABLE LAWS. SPILLS MAY NEED TO BE REPORTED TO THE NATIONAL RESPONSE CENTER (800/424-8802). THE SPILLED MATERIAL AND ANY WATER OR SOIL WHICH IT HAS CONTACTED MAY BE HAZARDOUS TO ANIMAL/AQUATIC LIFE.				
faste isposal lethods	MAXIMIZE PRODUCT RECOVERY FOR REUSE OR RECYCLING. USED OR CONTAMINATED PRODUCT COULD BE AN EPA "IGNITABLE HAZARDOUS WASTE" (DOO1). USE APPROVED TREATMENT, TRANSPORTERS, AND DISPOSAL SITES IN COMPLIANCE WITH ALL APPLICABLE LAWS. IF SPILL IS INTRODUCED INTO A WASTEWATER SYSTEM, THE CHEMICAL AND BIOLOGICAL OXYGEN DEMAND WILL LIKELY INCREASE. SPILL MATERIAL IS BIODEGRADABLE IF GRADUALLY EXPOSED TO MICRO-ORGANISMS. POTENTIAL TREATMENT AND DISPOSAL METHODS INCLUDE LAND FARMING, INCINERATION AND LAND DISPOSAL, IF PERMITTED.				
X.	Components (This may not be a complete)				
omponent Na					
· · · · · · · · ·	(See Qualification on Page 4 YTIC CRACKED DISTILLATE 64741-58-9* N/AP EQ 100 PERCENT DIEUM)				
THIS MATER	ALIS LIKELY TO CONTAIN A 1 WT.% OF 4- TO 6-MEMBERED RING AROMATIC HYDROCARBONS.) N/AP				

##Listed By: 1 = NTP, 2 = IARC, 3 = OSHA, 4 = Other

Compositions given are typical values, not specifications.

FOR LIGHT CYCLE DIL		MSDS No. APPC 860		
X. (1) (1) (1) (1)	Physical and Chemical Data			
Boiling Point . AP 450° TO	Viscosity Units, Temp. (Method) 75° F AP 35 SUS AT 100° F (D2161	Dry Point		
Freezing Point AP -25°F	Vapor Pressure (REID-FSIA AT 100°F) LT 0.1	Volatile Characteristics SLIGHT		
Specific Gravity (H _z O = 1 a AP 0.94	39.2°F) Vapor Sp. Gr. (Air = 1.0 at 60° - 90°F) Solubility in Wangeligible	eter pH N/AP		
Hazardous Polymerization NOT EXPECTED TO OCCUR	Other Chemical Reactivity N/P	Stability - STABLE		
Other Physical Pand Chemical Properties T	UR POINT TEMPERATURE = AP -10°F. (ASTM D-97). Pical Sulfur Content = AP 1.2 WT.% (ASTM D-2622)	•		
7000.0	YELLOW TO AMBER-COLORED LIQUID; STRONG KEROSENE-TYPE COOR:			
Conditions o Avoid	AT AND IGNITION SOURCES.			
Aaterials S	STRONG ACIDS, ALKALIES, AND OXIDIZERS SUCH AS			

Products XI.

to Avoid

Hazardous

Decomposition

Additional Precautions

BURNING OR EXCESSIVE HEATING MAY PRODUCE CARBON MONOXIDE

AND OTHER HARMFUL GASES/VAPORS INCLUDING OXIDES

AND/OR OTHER COMPOUNDS OF SULFUR AND NITROGEN.

Handling, Storage and Decontamination

SPECIAL SLOW LOAD PROCEDURES FOR "SWITCH LOADING" MUST BE FOLLOWED TO AVOID THE STATIC IGNITION HAZARD THAT CAN EXIST WHEN THIS MATERIAL IS LOADED INTO TANKS PREVIOUSLY CONTAINING GASOLINE OR OTHER LOW FLASH POINT PRODUCTS. (SEE A.P.I. PUBLICATION 2003.) KEEP CONTAINERS CLOSED AND AWAY FROM HEAT AND IGNITION SOURCES! ALL ELECTRICAL EQUIPMENT IN AREAS WHERE PRODUCT IS STORED/HANDLED SHOULD BE INSTALLED IN ACCORDANCE WITH APPLICABLE REQUIRE-MENTS OF THE NATIONAL ELECTRIC CODE, N.F.P.A. DO NOT USE THIS PRODUCT AS A Procedures CLEANING AGENT. EMPTY CONTAINERS RETAIN SOME LIQUID AND VAPOR RESIDUES. AND HAZARD PRECAUTIONS MUST BE OBSERVED WHEN HANDLING EMPTY CONTAINERS.

LIQUID CHLORINE AND OXYGEN.

General Comments

SPECIFIC EXPOSURE STANDARDS/CONTROL LIMITS FOR THIS MATERIAL HAVE NOT BEEN AGPEED UPON: THEREFORE, BOTH ACGIH TLV CONTROL GUIDELINES (SEE SECTION VI.) ARE SUGGESTED FOR INTERIM USE UNTIL SPECIFIC STANDARDS/CONTROL LIMITS ARE THE PARTICULATE POLYCYCLIC AROMATIC HYDROCARBONS (PPAH) TLV IS ADOPTED BASES UPON COAL TAR PITCH VOLATILES (AS BENZENE SOLUBLES), NOT UPON PETROLEUM DISTILLATE.

MATERIALS SIMILAR TO SOME COMPONENTS IN THIS PRODUCT WERE FOUND TO BE MUTAGENIC IN "IN VITRO" AND "IN VIVO" LABORATORY TESTS. THE EXACT RELATIONSHIP BETWEEN THESE RESULTS AND POSSIBLE HUMAN EFFECTS IS NOT KNOWN.

SOME OF THE INFORMATION PRESENTED AND CONCLUSIONS DRAWN HEREIN ARE FROM SOURCES OTHER THAN DIRECT TEST DATA ON THE MIXTURE ITSELF.

- - Note - - - Qualifications

EQ = Equal LT = Less: Then GT = Greater Than

AP = Approximately UK = Unkown TR = Trace

N/P = No Apolicable Information Found N/AP = Not Applicable

N/DA = No Data Available

Disclaimer of Liability

The information in this MSDS was obtained from sources which we believe are reliable. HOWEVER, THE INFORMATION IS PROVIDED WITHOUT ANY WARRANTY, EXPRESS OR IMPLIED, REGARDING ITS CORRECTNESS.

The conditions or methods of handling etorage use and disposal of the product are beyond our control and may be beyond our knowledge. for this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.

This MSDS was propored and is to be used only for this product. If the product is used as a component in gnother product, this MSDS information may not be applicable.



Hunter/Greag, Inc 18350 Mt. Langley St., Suite 100 Fountain Valley, CA 92708 (714) 964-8722

December 18, 1989

Mr. Tim Albright
US Pollution Control Inc.
104080 Slover Avenue
Fontana, California 92335

SUBJECT: RESULTS OF SOIL SAMPLING PROGRAM CONDUCTED AT A UNION PACIFIC CORPORATION SITE LOCATED AT 12364 WHITTIER BOULEVARD AND MAR VISTA AVENUE IN WHITTIER, CALIFORNIA (Project #01-479-001).

Dear Mr. Albright:

Following soil sampling activities at the subject location (Figure 1), Hunter/Gregg, Inc. (Hunter) is submitting this letter report which documents soil sample collection procedures, field observations, results of laboratory analyses, and our conclusions.

BACKGROUND

In 1987, IT Corporation conducted an investigation at the subject location. Based on this investigation the County of Los Angeles - Department of Public Works - Waste Management Division (County) submitted a letter, dated November 27, 1989, to Union Pacific Corporation requesting an additional investigation be conducted.

In December 1989, U.S. Pollution Control Inc. (USPCI) retained Hunter/Gregg, Inc. (Hunter) a Fountain Valley, California firm specializing in environmental engineering and hydrology, to conduct a soil sampling program. This program consisted of collecting soil samples adjacent to a 550-gallon capacity underground gasoline storage tank and an underground concrete waste oil sump, which has a reported capacity of approximately 200 gallons.

GEOLOGY AND HYDROGEOLOGY

The site lies at an elevation of approximately 240 feet above mean sea level and is located approximately 2 miles south of the Whittier Narrows and 2 miles east of the present course of the San Gabriel River. In the area of the site, surficial sediments of Holocene age were derived primarily from stream channels and flood plains of the ancestral San Gabriel fluvial systems. These deposits range from 40 to 70 feet thick and are composed primarily of fine-grained sand, silt, silty sand, sandy clay, and silty clay (Yerkes and others, 1965).

Based on a topographical map of the area, direction of ground-water flow is expected to be to the south-southwest (U.S. Geological Survey, 1981). The depth of ground water was reported at 41.8 feet in a well (1632 C) located approximately 3/4 mile west-southwest of the subject location (personal communication, Mr. Rodney Brown, Los Angeles County Flood Control District [LACFCD], December 15, 1989). Ground water was not found in borings, as deep as 40 feet, drilled as part of this investigation.

REFERENCES

Yerkes, R. F., McCulloh, T.H., Schoellhamer, J. E., and Vedder, J. G., 1965, Geology of the Los Angeles Basin - An Introduction: U. S. Geological Survey Professional Paper 420-A, 57p.

DRILLING AND SOIL SAMPLING

On December 5, 1989, Gregg Drilling & Testing, Inc., under the supervision of a Hydrogeologist from Hunter, drilled four 40-foot soil borings using a truck-mounted Mobile Drilling Company Model B-61 equipped with hollow-stem augers. Borings B-1 and B-2 were drilled adjacent to the 550-gallon underground gasoline tank, and Borings B-3 and B-4 were drilled next to the concrete waste oil sump. Soil samples were collected in each of these borings at depths of 5, 10, 15, 20, 30, and 40 feet using a Modified California Sampler. All methods of collecting, storing, and transporting soil samples were in accordance with established methods determined by Federal, State and local agencies.

LABORATORY ANALYSES

Chemical analyses of the soil samples were performed by Associated Laboratories, an independent State-certified analytical laboratory located in Orange, California. Soil samples collected from each of the four borings were analyzed for Total Petroleum Hydrocarbons (TPH) in accordance with California

Department of Health Services [DHS] Method TPH-DHS (also known as Environmental Protection Agency (EPA) Method 8015), and analyzed for Benzene, Toluene, Ethyl Benzene, and Total Xylenes (BTEX) using EPA Method 8020. Soil samples from Borings B-3 and B-4 were also analyzed for TPH using EPA Method 418.1.

FINDINGB

Lithologic Results

Shallow soil beneath the site, to a depth of 40 feet, consists primarily of clay with an occasional layer of sand. Primarily the clay is silty, gray, stiff to hard, and dry. Clay was generally found from the ground surface to 10 feet and from 20 to 40 feet. A layer of sand was found at depths from approximately 10 to 20 feet in Borings B-1 and B-2. The sand, which contains some gravel, is predominantly light gray, very dense, and dry. No petroleum odors were detected by the Hydrogeologist in any of the four borings. A more detailed description of the soil types found in each boring is presented on the attached boring logs.

Laboratory Results

1 &

*

Soil sample results are summarized in Table 1. Copies of the laboratory report and chain-of-custody are attached. Laboratory results indicated TPH and BTEX concentrations were NOT DETECTED in any of the soil samples collected with the exception of the 5-foot soil sample from Boring B-4. This soil sample indicated a TPH concentration of 30 milligrams per kilogram (mg/kg) or parts per million (ppm) using EPA Method 418.1.

CHEMICAL RESULTS OF SOIL SAMPLES ANALYZED FOR TABLE 1. PETROLEUM HYDROCARBONS USING EPA METHODS 8015, 418.1 AND 8020 (mg/kg)

SAMPLE NUMBER	DEPTH (ft)	TPH 8015*	TPH 418.1*	BTEX 8020*	
B-1	5 10 15 20 30 40	ND ND ND ND ND	NA NA NA NA NA	ND ND ND ND ND	
B-2	5 10 15 20 30 40	ND ND ND ND ND	NA NA NA NA NA	ND ND ND ND ND	
B-3	5 10 15 20 30 40	ND ND ND ND ND	ND ND ND ND ND	ND ND ND ND ND	
B-4	5 10 15 20 30 40	ND ND ND ND ND	30 ND ND ND ND	ND ND ND ND ND ND	

Notes:

milligrams per kilograms or parts per million (ppm)feet measured from original grade mg/kg

ft

- Not Detected. Less than limit of detection indicated ND

on laboratory report

NA Not Analyzed

- Total Petroleum Hydrocarbons TPH

В - Benzene T - Toluene

E - Ethyl Benzene - Total Xylenes X

- EPA Method

EPA - Environmental Protection Agency















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	B-104			~	X	X															1	
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NORMAL TURNADOUND (RESULTS BY 12/13 PLEASE)

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DATE 12/6/81 PAGE 7 OF 2

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May 5, 1990

Mr. Tim Albright U.S. Pollution Control, Inc. 14080 Slover Avenue Fontana, California 92335

SUBJECT: RESULTS OF A SOIL SAMPLING PROGRAM CONDUCTED AT A UNION PACIFIC CORPORATION SITE LOCATED AT 12364 WHITTIER BOULEVARD AND MAR VISTA AVENUE IN WHITTIER, CALIFORNIA (Project \$01-479-001).

Dear Mr. Albright:

Environmental Science & Engineering, Inc. (ESE), formerly Hunter/Gregg, Inc., is pleased to submit this letter report which documents our participation during a tank removal and soil sampling program recently conducted at the subject property. All requirements for tank closure have been met.

TANK REMOVAL

On March 12, 1990, U.S. Pollution Control, Inc. (USPCI) of Fontana, California excavated, rinsed and removed an 880-gallon gasoline underground storage tank from the subject location (Figure 1 and 2). During the excavation activities, ESE conducted soil monitoring as required by the South Coast Air Quality Management District (SCAQMD). No organic vapor concentrations exceeding the SCAQMD requirements were monitored during the tank removal.

The storage tank appeared to be in good condition, without obvious pitting or holes. Upon removal the tank was transported under proper manifest documentation by USPCI to a Class I disposal facility in Grassy Mountain, Utah. The manifest documentation is available upon request.

SOIL SAMPLING

Following the tank removal, a geologist from ESE collected two soil samples from beneath the former tank location (Figure 2). Soil samples #1 was collected directly below the former tank location, and soil sample #2 was collected from 2 feet below the tank invert at the same location. Soil removed during the tank removal was later backfilled into the excavation and compacted.

Page 2

May 5, 1990

Mr. Albright/USPCI

CHEMICAL RESULTS

Soil samples were analyzed by Associated Laboratories, a Department of Health Services (DHS) certified laboratory in Orange, California. The soil samples were analyzed for total petroleum hydrocarbons (TPH) using DHS Method TPH-DHS and for benzene, toluene, ethylbenzene and total xylenes (BTEX) using Environmental Protection Agency Method 8020. Copies of the laboratory reports and chain-of-custody documents are attached.

Results of the chemical analyses of the soil samples collected from beneath the gasoline tank on the Union Pacific Corporation property are summarized in Table 1.

TABLE 1. CHEMICAL RESULTS OF SOIL SAMPLES COLLECTED BELOW THE REMOVED TANK

SAMPLE NUMBER	METHOD TPH-DHS	1	EPA METHOD	8.020	
NOMBER	ТРН	В	T in mg/kg	E	x
#1	19 ND<10	ND<0.05	0.1 ND<0.05	ND<0.1	1.0 ND<0.1

NOTE:

mg/kg: milligrams per kilogram

ND: not detected (below indicated detection limit)

EPA: Environmental Protection Agency DHS: Department of Health Services TPH: total petroleum hydrocarbons

BTEX: benzene, toluene, ethylbenzene and total xylenes

CONCLUSIONS

The soil sample (Sample #1) collected directly below the original location of the tank contained 19 milligrams per kilogram (mg/kg) of TPH, 0.1 mg/kg of toluene and 1.0 mg/kg of xylenes. The verification soil sample collected 2 feet below the tank invert (Sample #2) did not contain detectable concentrations of TPH or BTEX.

Page 3 May 5, 1990 Mr. Albright/USPCI

Based on field evidence and chemical analyses of soil samples collected at the Union Pacific Corporation facility, no further remedial or monitoring activities are recommended for the tank excavation area.

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Our professional services have been performed using that degree of care and skill ordinarily exercised under similar circumstances by other professionals practicing in this field. No other warranty, expressed or implied, is made as to the professional advice in this report. If you have any questions regarding the material presented in this report, please do not hesitate to contact the undersigned at (714) 964-8722.

Sincerely,

ENVIRONMENTAL SCIENCE & ENGINEERING, INC.

Elizabeth Robbins, R.G.

Project Hydrogeologist

Dean O. Gregg, P.E., R.G. Senior Vice President





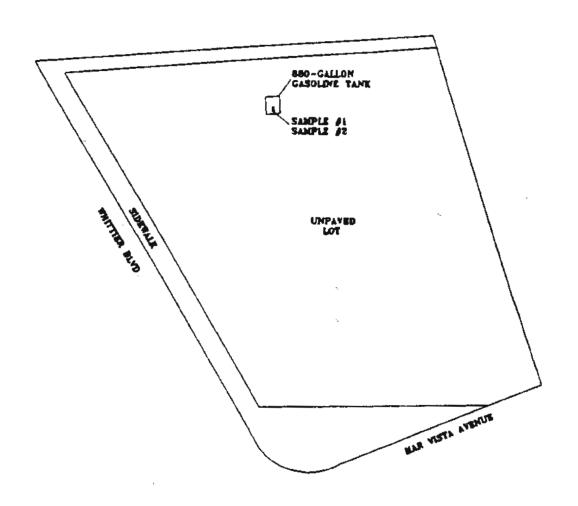
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U.S. POLLUTION CONTROL
WHITTIER & MAR VISTA
WHITTIER, CA

LOCATION MAP

4/90	PROJECT No.	-001	FIG #
SHEET NO	SITELOCM	8	5 X 11
P. LEETS	APPROV	OBBINS	REV



EXPLANATION

SAMPLE POINT

0 40 FEET SCALE





U.S. POLLUTION CONTROL
WHITTIER & MAR VISTA
WHITTIER, CA

SITE MAP









CONCLUSIONS

Field evidence and laboratory results indicated Total Petroleum Hydrocarbon (TPH) and Benzene, Toluene, Ethyl Benzene, and Total Xylenes (BTEX) were NOT DETECTED in any of the soil samples collected and analyzed from Borings B-1, B-2, B-3 and B-4, except for the 5-foot soil sample collected from Boring B-4. This soil sample contained a TPH concentration of 30 mg/kg using EPA Method 418.1. This TPH concentration is considered low, and further work in the area of the waste oil sump should not be required.

Ground water was not found above a depth of 40 feet from the ground surface, based on soil borings conducted as part of this assessment.

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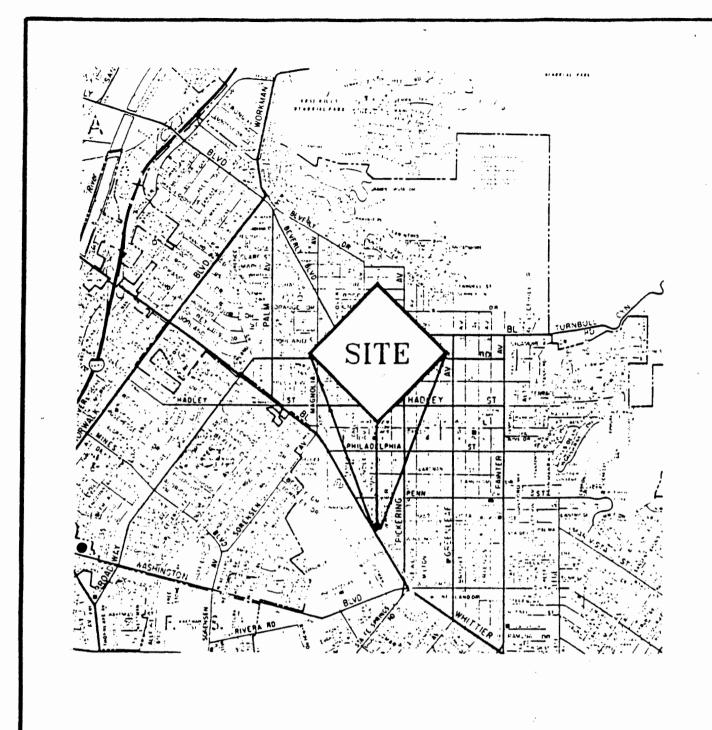
If you have any questions, please do not hesitate to contact the undersigned at (714) 964-8722.

Sincerely, HUNTER/GREGG, INC.

Greg Štuesse Project Engineer

Attachments

Dean O. Gregg, P. H., R.G. Principal Hydrogeologist





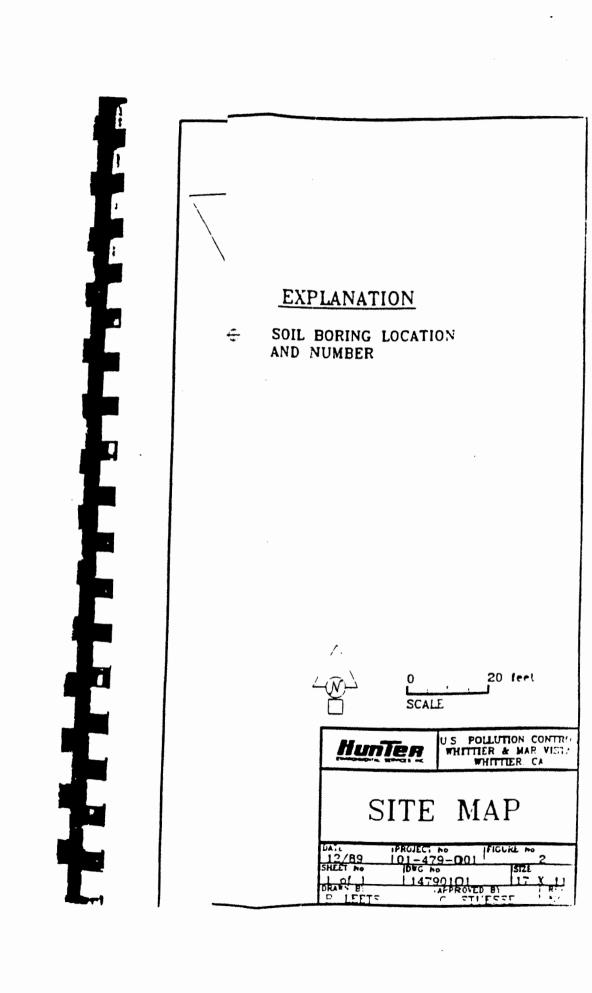
0 2.800 FEET



U.S. POLLUTION CONTROL
WHITTIER & MAR VISTA
WHITTIER, CA

LOCATION MAP

12/89 0	1-479-001	FIGURE	No. 1
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DRAWN BY P LEET	rs G. Stu	ESSE	NC NC



APPENDIX B
BORING LOGS

		EXP	LOG O			Project No: 01-479-001 Boring No: 8-1 Client: U.S. Pollution Control Date: 12-05-89
Field l	ocation of t	poring:				Location: Whittier Blvd. & Mar Vista Driller: CDT Logged By: M. Baiady Hole Diameter: 6.75*
	GASOLINE TAN	ıK				Drilling Method: Mobile 8-61 Page No: 1 of 1 Hollow stem auger. Installation Data: Backfilled with Enviroplug, capped w/concret
Pepth (ft)	•	Blow/ft	•	and Depth	pe Soil Group Symbol (U.S.C.S.)	
0		J	! !	! <u></u>		
2 (1	! 	Grab Sampl	el cl	[] Silty clay, brownish gray, slightly moist, no odor.
4		(1 (1	 		-	! !
6 Y		14	85	B-1 2 5'	_!	a 5' Silty clay, brownish gray, medium stiff, dry, no odor.
8						!
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16 [100	25	8-1 a 15'	sw	 a 15' Sand,coarse, gravel, light gray, very dense, dry, no odor
18 (11/ 1/1/1/1/1/				 	
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30 Y		39 	0	9-1 a 30'	cl _	a 30° Clay, gray, hard, slightly moist, no odor.
32		 .			 -	
34 V			! !		 -	
36		 				2 40', Clay, gray, hard, slightly moist, no odor. TOTAL DEPTH = 40 FEET
40		 . 35	25	8-1 2 40'	.ii	This work was performed under my supervision,
 				J-1 3 40'	. .	and I concur with the findings.
i					.ii	Dean O. Gregg, California Registered Geologist #4122

, ,

			LOG O			Project No: 01-479-001 Boring No: 8-3
		EXP	LORATORY	SOR ING		[Client: U.S. Pollution Control . Date: 12-05-89 Location: Whittier Blvd. & Mar Viata Driller: GDT
Field I	location of b	oring:				Logged By: M. Baiady Hole Diameter: 6.75#
-,						Drilling Method: Mobile 8-61 Page No: 1 of 1
	SUMP					Hollow stem auger.
						Installation Data: Backfilled with Enviroping, capped w/concrete
l		l	Vepor	Sample type	Soil Group	
Depth			•	and Depth		<u> </u>
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4						i ·
[9	200	8-3 a 5'	! cl	 a 5' clay, gray, soft, slightly moist, no odor.
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12 (17	225	8-3 a 10'	cl	a 10' clay, gray, soft, slightly moist, no odor.
14 y					 	
16 [25	50	B-3 a 15'	cl	 a 15' clay, light brown, medium stiff, dry, no odor.
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32		37	150	8-3 a 30'	cl	8 40' clay, light brown, hard, dry, no odor.
34	///////////////////////////////////////					
36 V	/////////		!	 		a 40' Clay, light brown, hard, dry, no odor.
(/ 38 (/	///////////////////////////////////////	 		1 	I	TOTAL DEPTH = 40 FEET
40 Y	///////////////////////////////////////	 45	125	B-3 a 40'	 cl	This work was performed under my supervision,
						and I concur with the findings.
•	1	I	!	ļ	!	Weart Man
!	1.	!	!			Open O. Green Callifornia Basistand Gasistan #1122
	ı	ļ			!	Dean O. Gregg, California Registered Geologist #4122

4.

LOG OF Boring No: 8-4 |Project No: 01-479-001 EXPLORATORY BORING Date: 12-05-89 [Client: U.S. Pollution Control |Location: Whittier Blvd. & Mar Vista Driller: GDT ifield location of boring: Logged By: M. Saiady Hole Diameter: 6.75H |Drilling Method: Mobile 8-61 Page No: 1 of 1 Hollow stem auger. SUMP |Installation Data: Backfilled with Enviroplug, capped w/concrete. |Vapor |Sample type|Soil Group|Watar Level | Time | Date | Comments: Depth | Graphic |Blow/ft|Concen-| and Depth | Symbol | | (ft) | Log tration [(U.S.C.S.)] (ppm) 104-44 Concrete 0 2 |Grab Sample| cl [Clay, brownish gray, loose, slightly moist, no odor. cl |8 5' Clay, brown, medium stiff, slightly moist, no odor. 10 12 50 | B-4 a 10' | cl |a 10' Clay, light brown, medium stiff, dry, no odor. 14 16 180 18 15' Silty clay, light brown, medium dense, dry, no odor. 18 20 22 200 B-4 2 20' | 12 20' Silty clay, light brown, dense, dry, no odor. 24 26 28 30 | B-4 @ 30' | 32 125 cl |a 30' Clay, brown, stiff, dry, no odor. 34 36 |a 40' Clay, brown, stiff, dry, no odor. ITOTAL DEPTH = 40 FEET 38 This work was performed under my supervision, 40 concup with the findings. 150 | 8-4 2 40' | cl Dean O. Gregg, California Registered Geologist #4122

APPENDIX C LABORATORY REPORT AND CHAIN OF CUSTODY





Dear Valued Customer:

Enclosed is a copy of your analytical data report.

National Analytical Laboratories is proud to submit this data to you. Our laboratory conducts testing using state-of-the-art instrumentation with standardized E.P.A. or other recognized methods. The data in the report you are receiving has been validated using a well documented quality assurance program. Each test is conducted under a standardized method format with a set of quality control checks. These checks include a three - point calibration standard using authentic reference materials, a method blank to validate background and a method control spike to validate accuracy. One in ten samples are run in duplicate to validate precision of the method. Detection limits for all methods have been determined statistically and reflect a value at which the method can no longer generate accurate quantifiable data.

If you have any concerns about the data or need help interpreting the report, please call me at (918) 446-1162.

Respectfully submitted for National Analytical Laboratories

James W. Engman

Laboratory Director

JWE/cdr

Enclosure: Report

A Division of US POLLUTION CONTROL INC

MARX FOSTER UBRICH REMETORS SER TOSE 14080 BLOMER A CHUE

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MARK FORTER LERGI - RELEGIAL KEVMILER L- BI BIOMER KWEMLE

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A DIVISION OF

MARK FORDEA DER DO HIR REMEDIAL HERNOOF DADED HEDDUNG AMERICE

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TRIRI MUMBER: BBCLADE

MARK FORTER
TURROS - REMEDIAS RERVOSES
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FARE RESERVES, SU SARRES
CASE SORRIESES DE LO SARRES

NAMBLE DENTIFICÁTION: SELV VETIMER DIENTOFICIATION: WEEK DATE SAMBLED: LI 12 BF ,DRE OF MATERIAL: SOLOD	; -	DATE RECEDVED / 1. 14×43 DAGE LORRIETEDY .L 21 83	
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A Division of



MARK FIRIEF VERIO - REMEDIAL FERMICES 14181 FLIVER AVENUE

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TRIRT WIMBER: BRIGALE

FARE

AMPLE CIEMPTFOLATION: BBOU-04 PRIMER CIEMPTFOLATION: WEST MELE

DATE RELEDVED: 11 14 11 DATE DIMPLETEI: 11 12 83

CATE BAMBLED: 10 10 68 FREE OF MATERIAL: 80100

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- BELOW DETECTION LIMIT



MARK FIRTER WIFIT - REMEDIAL BERVILES INIE ELIVER AVENUE

FINTANA 14 FIEE

FIRT NUMBER: FEGUALE

FAGE 10

'MPAR IDENTIFICATION: 8811-10 TRIMER DIENTIFICATIONS KENI

DATE RESERVED: 11 14 88 DATE COMPLETED: 11 12 89

TATE SAMPLED: 11 13 88 (FFE OF MATERIAL) (SILIC

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/ CORDANE	EF 4 8181	೨೯ ಚರ	BBL UG
	_ EFA 3030	25 25	BIL UG
14.4 - 12.2	EPA 2031	1,13 13	B01 95
, (4	EPA 3130	0.33 26	BDL UG
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	EPA 9080	0.08 UG	BEL UG
ENTRIN ALDEHUEE	EFA BOBD	0.03 00	BDL UG
ysa ta belda	EFA BOBO	0.65 UG	BDL LG
FTAINLOR BROWIDE	5FA 8080	5.35 UG	EDL UG
THEFREN	EFA BOSO	0.05 UG	SDL US
TRINE	EFA 3030	3.35 UG	BDL UG
THOMTOHLOR	EFA 8080	1.05 UG	BDL UG
T MARKENE	27A 3030	0.05 UG	adl UG
i particularia		0.10 01	223 33

TOL = BELOW DETECTION LIMIT

A Division of U S POLLUTION CONTROL INC

MARK FIRTER USFOO POPEMEDIAL SERMODES 14080 SLOWER AVENUE 14 -1333

EFIRI MUMBER: EFILALE 9435

(RMPLE IDENTIFICATION: #801-11 , UNTIMER IDENTIFICATION: WAND TATE RAMPLED: 11 18 88 , WRE OF MATERIAL: #9010 DADE RECEDUZD: 11 14 65 DADE COMPOSTED: 11 11 65

SEREMETER	3.5. V.3.5.5.		
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154A-ERI	254 8181	1.08 99	BIL UG
NTA-Bal	EFÁ 8080	38 33	១៩៦ ១៤
juliareau	EFA 8081	18 VG	2.4
JAMMA-IHI	EFA BOBI	.13 05	BDL UG
CALIBLARE	EFA 8080		BIL UU
- 1.5	EFA 1131	11 22	BDL LG
- 	EPA 8080	1.11 113	EDL UG
	EFA 8080		adl TG
(±1171)	EFA EDEC	1.11 15	5D1 8G
Avilius fam i	EPA 8030	j. 15 ūž	
TARITETERA	EFA 8183	A	BIL UG
(TIPELIFAM EVIFATE	EPA 6080	0.03 05	551 UG
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57 INE	27A 8080	5.68 03	adl ug
(⁷ 1818118108	EPA 6080	1.05 UG	EDL UG
MARAEME	ΣPA 8030	0.08 UG	BDL UG
1	21 A 2000	9.22 03	30L 3G

POL = BELOW DETECTION LIMIT

A Division of



MARA FOSTER 1 USFOO - REMEDIAL SERVICES 14080 SLIVER AVENUE

FILTARA

STAT WUMATA: SACIALA

FARE 11

**MFIE | CENTIFICATION: BECC-11 | STOMER COENTIFICATION: WSWL | CATE BAMPLED: | 11/13/88

DATE RECEIMED: 11 14 ER DATE DIMPLETED: 11 12 ER

FUFE OF MATERIAL: EGLIC

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LIZEIN	574 97£3	0.08 UG	
ARTOLOR 1016	57A - 5181 - ×		201 00
(NOCLER HIDT	574 8080	2.8 83	BDL UG
.0000a 1232	58A 6081	2 / 5 / 1/5	331 UG
FREELOR 1242	2 7.6 2162	1.5 05	BDL UG
	E9 - 8181	2.3 05	adl Ud
10008 4004	EFA ELEL	1.8 99	BDL UG.
ARDILIE 1151	274 8181 274 8181	2.5 UU 1.18 UU	BDL UG
1584-881 1074-882	ATA BARA ZBA RARI		201 03 (
	57A 8080		EDI CI
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		1.15 125	821 UG
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,, ;	TFA	0.18 35	301 TF
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ACTIEVEFAN I	EFA 3030	1.13 03	255 23
DUDDEVLEAM DD	EFA BIBI	1/18 53	
TESULFAN BULFATE	27.4 E181	1,13 US 0,18 US	EDL UF EDL UF
CORING ALCERTIE	EFA 8080 EFA 8080	,	
- INDREM RADARIA - ARFAGRICA	EFA 6061	1.00 WG 3.00 UG	
FTACHLOR EFEMIDE	JEFA EIEI	0.00 96	
14IIRIN	ZFA BIBI	1.33 86	501 33 501 33
KEFIN E	EFĀ BOSO	0.33 13	BDL UG
TROMTORLOR	EFA. 8080	0.05 06	321 03
1 NAPHENE	37A 3080	อ.อิริ ซิติ	SDL US

FOL = BELOW DETECTION LIMIT

A Division of



MARK FOSTER USFOT - REMEDIAL SERVICES

14080 BLOVER AVENUE

FINTANA

IA 81111

EFORT NUMBER: SECTATE

FAGE

NAMPLE | IDENTIFICATION: 8801-13

, USTOMER IDENTIFICATION: WSWI DATE SAMPLED: 11/13/69

DATE RECEDUED: 11 14 89 PATE COMPLETED: 11 02 89

, WEE OF MATERIAL: SILID

FREAMELEE		III LIMII	773
1.		•	
PERIN	EPA BOBO	0.08 23	EDL UG
ARCCLOR 1016	EPA EDEC	2.8 86	BDL UG
(ROCLOR 1001	EPA 8080	2.9 UG	BDL UG
NOCLOR 1131	EFA 6060	2.3 03	BDL UG
ABBILOR 1042	, EFA 2020	2.8 73	EDL UG
,80010R 12÷8	EFA BIB?	2.3 UG	BDL UG
10010R 1084	EFA 8080	2.5 UG	BDL UG
LUCCIOR 1280	23A,5080	2.5 95	BDL UG
A LP HA - E HC	EPA EDEO	0.05 85	BDL UG
TT=-EHC	EFA 6080	.33 85	BDL UG
JITA-BHI	EPA EDB0	1.08 85	BDL UG
GAMMA-EHD	58A 8080	1.05 UG	0.06 05
/ KIDRIAME	EFA 8080	1.08 40	BDL UG
+1-000	EFA BIBS	1.05 05	BDL UG
4:4)-111	EFA BIBC	1.18 13	BDL UG
);	EPA 6080	C.25 UG	BDL UG
CELERIN	EFA 8080	0.08 WG	EDI UG
1/DISULFAN I	EPA 8080	0.05 UG	. BDL UG
ENDOSULFAN II	EFA 8080	5.08 WG	BDL UG
MITSULFAN BULFATE	EPA 2080	3.08 M3	BDL UG.
(IEEIM	EFA 8080	o.os ug	BDL UG
ÈMERIN ALDERVOE	EFA 8080	0.08 UG	BDL UG
, SPDACHIOR	EPA 8080	0.05 00	BDL UG
PTACHLOR EPOXIDE	EPA 3080	V. 25 49	BDL UG
1:ODRIN	EPA 9080	0.05 UG	BDL UG
FERGNE	EPA 8080	0.05 UG	BDL UG
() THOMYCHLOR	EFA 8080	0.05 UG	BDL UG
HAPHENE	EFA, 8030	0.05 UG	BDL UG

= BELOW DETECTION LIMIT



MARK FIETER

USFOI - REMEDIAL SERVICES 14081 SLIVER AVENUE

FINTANA IA FIEE

EFIRT NUMBER: SSILALS

FAGE 14

IDENTIFICATION: 8801-14 AMPLE

DATE RECEIVED: 11 14.85 DATE IDMFLETED: 11 11.89

. USTOMER IDENTIFICATION: WEWE DATE SAMPLED: 11/13/83 (FIFE OF MADERIAL: SOLED

* <u>FARAMETER</u>	EEF. METHUR,	131 11W17	
1.	•		
JUERIN	EFA 6080	5.68 UŠ	BIL UG
AROSLOR 1016	<u> </u>	2.3 UG	801 UG
('ROSLOR 1551 -	EFA BIBI	2.9 UG	BEL UG
acctor 1232	EPA 5090	2.3 89	BDL UG
· [- 사고 도둑으로 가고 도둑으로	FA 2080	2.5 13	· EDL UG
, ROCLIR LIAB	37A 1030	I.5 15	BDL UG
	SPA BIBS	. 2.5 UG	BDL UG
420010R 1080	5 7A 8083	J.3 UĞ	BDL UG
%1P 8A - E 8D	EFA EDED	I.DS UG	BDL UG
1 274-880	EFA 8080	1.05 13	BDL UG
LELTA-BHI	37A 8080	i.os ug	EDL US
GAMMA-BHI	37A 8080	1.08 85	0.051 UG
HIDREAUE	EFA BUBO		301 UF
4 -323	EFA 8081	1.0 3 UG	301 60
4,4,4,5 <u>D</u> E	EFA 8090	1.15 UG	BD1 UG
	EPA 3030	1.05 00	521 UG
TELDRIN	EPA 8180	1.05 UG	BDL UG
LNIGBULFAN I	ZFA 6080	0.03 U G	BDL UG
THE STATE OF THE S	EPA 8092	0.03 UG	BDL US
MISSULFAN SULFATE	EFA 8080	១.១៩ ម ៤	adl UG
MIRIM	EPA 8080	0.05 UG	BDL HUG
ENDRIN ALUERYDE	EPA 8080	5.35 U G	adl UG
EPTACHLOR	EFA 8080	0.03 UG	BDL UG
EFTACHLOR EFOXIDE	EFA SOSO	0.03 UG	BDL UE
TEIDRIN	EPA 2080	0.05 UG	PDL UG
TEFONE	EPA 8080	0.05 86	BDL UG
ETHOMYCKLOR	EFA 6050	0.05 UG	BDL UG
LIMAPHENE	27A 8030	0.0\$ UG	BDL UG

FOL = BELOW DETECTION LIMIT

NATIONAL ANALTHUAL LABORATURIES



U S POLLUTION CONTROL. INC

MARK FOSTER

USFIC - REMEDIAL SERVICES 14080 SUCVER AVENUE

FINIANA

14 11111

' argat Number: sectate

FAGE 1 =

MAMPLE | IDENTIFICATION: 5801-18

DATE RECEIVED: 0 11014 88 DATE COMPLETED: 11 00 88

USTOMER IDENTIFICATION: WSW4-DATE SAMPLED: 11:13:85 ,UFE OF MATERIAL: SOLID

ARAMETER	REF. METALE	III, LIMIT	131
1.			
LORIN	EFA 8080	0.08 46	BDL UG
ARGCICR 1018	EFA 8080	2.5 23	25L UG
, RDGLOR 1001	SFA BIBS	D.E UG	BDL UG
10000 1000	EDA ETEC	2.3 UG	SOL UG
4822247 1242	afa adao	i.s yg	BDL UG
SITUIS LIAB	DFA BOBS	1.5 UG	SDL UG
Troiting 1084	EPA/ BOBC	2.5 UG	EDL UG
.::::: :::::::::::::::::::::::::::::::	284 8081	J.a UG	BDL UG
-DRBA-BBD :	EFA BOBO	3.05 UG	EIL UG
150a-331	EFA BIBI	1.35 25	EDL UG
1:ITA-BHI	EFA 8080	. as ug	EDL LG
(11TAFBRI BAMMAFBRI	EFA BOSC	1,05 05	BDL UG
, ALTRIANE	EFA BOBD	. 38 88	EDL U3
, = 1 = 0.11	EFA 8080	1,13 03	. azi ug
ive - DDE	EFA 8080	1.03 03	BDL UG
17 7	EPA 3030	9.08 UG	SDL UG
/ NEIZZIN	EFA 8081	ē. Jā gā	BEL UB
	EFA 8080	0.35 UG	BDL US
POITS DIFANCII	ZFA 6060	0.05 46	BDL UJ
ANDIBULFAN BULFATE	ZFA 8080	5.38 UG	BOL TI
(1221)	EPA 2020	0.05 UG	EDL UG
TATALA ADDATES	EFA adad	0.05 06	BDL UJ
, priadrica	EFA 3080	0.08 UG	BDL EG
TRIACHLOR ERGNIDE	EFA 8080	0.05 UG	abl U3
1:11FIN	EPA 8080	0.05 UG .	BDL UG
FEFENE	ZFA 6080	0.05 UG	BIL UG
TRONYDALOA	EPA 3080	0.05 UG	BDL UG
, TAPHENE	ZFA 8080	0.05 96	BDL UG

RDL = RELOW DETECTION LIMIT



MARK FIRTER

WEFOR - REMEDIAL SERVICES 14090 SLIMER AVENUE

FINTANA

14 81333

EFERT NUMBER: SECIALS

FAGE 12

'AMPLE COENTIFICATION: SECURIE

| LETIMER ILENTIFICATION: WEWE DATE SAMPLED: 11/13/85

EATE RECEDIED: 11 14 89 DATE COMPLETED: 11 11 15 89

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I																						

PARAMETER	REF. METHIL	TET TIMET	
1			
12221	EFA 8180	0.03 83	801 83
4 R D T 1 D R	EFA 6083	2.5 23	BDL UG
/ SDDDER 1001	EPA BOBO	5.3 05	BEL UG
10112E 1232	EFA BCBG	2.1 03	SDL UG
	ZFA 8180	3.3 23	BDL UG
(800138 1048 (800108 1084	EFA 3130	1.1.25	abl uc
11	374 BOB?	1.1 23	EDL UG
	PAA 3080	I.: 95	BDL UG
11984-861	274 B181	1.28 95	BDL UG
(Rough Bad	27A 8030		5DL UG
	FFA 8080	1,61 93	B D 1
- A, A = T	25A 8030		BDL UG
POLICE AND	ĒFA 8180		
-1-123	E9A E080	2 () 4 ()	EDL UG
1,1-11	EFA 2010		
	27A 2020	1,15 Ju 1,15 Ju	BDL UG
/ Files	2FA 8080	0.03 25 0.03 25	BEL UG
1:Doeulfau I		0.08 23 0.18 UG	
	37A 8080		
SMIDEULFAN II	EPA 8080	1.05 93	BDL UG
MICEULFAN SULFATE	ZPA 8080	3.13 YG	BDL UG
4 10 8 1 14	EBV 8080	c.os ug	BDL UG
ÉGOSOM ALDEBUZE	EFA ĕĕĕI	e.is ug	בנ ענים
, REDAUBLOR	EFA &C80	0.03 UG	BDL UJ
FIRIALHER BRUMIDE	SPA 8090	0.35 U/3	BDL UG
1:01RIN	EPA 8080	0.05 UG	BDL UG
EFINE	EFA 8080	5.03 UG	BDL UG
hthemrealer	EPA 3050	0.08 UG	BDL UG
1 MARSENE	27A 8130	0.05 UG	BDL UG

TOL = BELOW DETECTION LIMIT



United States Pollution Control, Inc. Laboratory Number 35912-3 February 12, 1990 Page Three

Constituent	Approximate Detection Limit*	Concentration** (mg/kg)
Chrysene	0.66 mg/kg	ND
Di-n-octyl phthalate	0.66 mg/kg	ND
Benzo(b) fluoranthene	0.66 mg/kg	ND
Benzo(k) fluoranthene	0.66 mg/kg	ND
Benzo(a)pyrene	0.66 mg/kg	ND
Indeno(1,2,3-cd)pyrene	0.66 mg/kg	ND
Dibenz(a,h)anthracene	0.66 mg/kg	ND
Benzo(g,h,i)perylene	0.66 mg/kg	ND

- Detection limits may vary with the type of sample and with the concentrations of other species present.
- ND = Not detected, below detection limit.

Respectfully submitted, TRUESDAIL LABORATORIES, INC.

Judia nachtery

Julia Nayberg, Manager

Inorganic Chemistry

REPORT

TRUESDAIL LABORATORIES, INC.

CHEMISTS - MICROBIOLOGISTS - ENGINEERS
RESEARCH - DEVELOPMENT - TESTING

United States Pollution Control, Inc.

CLIENT 14080 Slover Avenue

Fontana, California 92335

Attention: Tim Albright

SAMPLE Soil #4

14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92680 AREA CODE 714 • 730-6239 AREA CODE 213 • 225-1564 CABLE: TRUELASS

DATE February 12, 1990

RECEIVEDFebruary 6, 1990

LABORATORY NO. 35912-4

INVESTIGATION Base Neutral Acid Extractables by GC/MS (EPA 8270)

Constituent	RESULTS Approximate Dectection Limit*	Concentration** (mg/kg)
Phenol	0.66 mg/kg	ND
bis(2-Chloroethyl) ether	0.66 mg/kg	ND
2-Chlorophenol	0.66 mg/kg	ND
1,3-Dichlorobenzene	0.66 mg/kg	ND
1,4-Dichlorobenzene	0.66 mg/kg	ND
Benzyl Alcohol	0.66 mg/kg	ND
1,2-Dichlorobenzene	0.66 mg/kg	ND
2-Methylphenol	0.66 mg/kg	ND
bis(2-Chloroisopropyl) ether	0.66 mg/kg	ND
4-Methylphenol	0.66 mg/kg	ND
N-Nitroso-Di-N-propylamine	0.66 mg/kg	ND
Hexachloroethane	0.66 mg/kg	ND
Nitrobenzene	0.66 mg/kg	ND
Isophorone	0.66 mg/kg	ND
2-Nitrophenol	0.66 mg/kg	ND
2,4-Dimethylphenol	0.66 mg/kg	ND
Benzoic Acid	0.66 mg/kg	ND
bis(2-Chloroethyoxy)methane	0.66 mg/kg	ND
2,4-Dichlorophenol	0.66 mg/kg	ND
1,2,4-Trichlorobenzene	0.66 mg/kg	ND

- * Detection limits may vary with the type of sample and with the concentration of other species present.
- ** ND = Not detected, below detection limit.

This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public and these Laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from these Laboratories.

United States Pollution Control, Inc. Laboratory Number 35912-4 February 12, 1990 Page Two

Constituent	Approximate Detection Limit*	Concentration** (mg/kg)
Naphthalene	0.66 mg/kg	ND
4-Chloroaniline	0.66 mg/kg	ND
Hexachlorobutadiene	0.66 mg/kg	ND
4-Chloro-3-methylphenol	0.66 mg/kg	ND
2-Nethylnaphthalene	0.66 mg/kg	ND
Hexachlorocyclopentadiene	0.66 mg/kg	ND
2,4,6-Trichlorophenol	0.66 mg/kg	ND
2,4,5-Trichlorophenol	0.66 mg/kg	ND
2-Chloronaphthalene	0.66 mg/kg	ND
2-Nitroaniline	0.66 mg/kg	ND
Dimethyl phthalate	0.66 mg/kg	ND
Acenaphthylene	0.66 mg/kg	ND
3-Nitroaniline	0.66 mg/kg	ND
Acenaphthene	0.66 mg/kg	ND
2,4-Dinitrophenol	0.66 mg/kg	ND
4-Nitrophenol	0.66 mg/kg	ND
Dibenzofuran	0.66 mg/kg	ND
2,4-Dinitrotoluene	0.66 mg/kg	ND
2,6-Dinitrotoluene	0.66 mg/kg	ND
Diethylphthalate	0.66 mg/kg	ND
4-Chlorophenyl phenyl ether	0.66 mg/kg	ND
Fluorene	0.66 mg/kg	ND
4-Nitroaniline	0.66 mg/kg	ND
4,6-Dinitro-2-methylphenol	0.66 mg/kg	ND
N-Nitrosodiphenylamine	0.66 mg/kg	ND
4-Bromophenyl phenyl ether	0.66 mg/kg	ND
Hexachlorobenzene	0.66 mg/kg	ND
Pentachlorophenol	0.66 mg/kg	ND
Phenanthrene	0.66 mg/kg	ND
Anthracene	0.66 mg/kg	ND
Di-n-butylphthalate	0.66 mg/kg	ND
Fluoranthene	0.66 mg/kg	ND
Pyrene	0.66 mg/kg	ND
Butyl benzyl phthalate	0.66 mg/kg	ND
3,3 -Dichlorobenzidine	0.66 mg/kg	ND
Benzo(a)anthracene	0.66 mg/kg	ND
bis(2-ethylhexyl)phthalate	0.66 mg/kg	ND

^{*} Detection limits may vary with the type of sample and with the concentrations of other species present.

^{**} ND = Not detected, below detection limit.

United States Pollution Control, Inc. Laboratory Number 35912-4 February 12, 1990 Page Three

Constituent	Approximate Detection Limit*	Concentration** (mg/kg)
Chrysene	0.66 mg/kg	ND
Di-n-octyl phthalate	0.66 mg/kg	Ν
Benzo(b)fluoranthene	0.66 mg/kg	ND
Benzo(k)fluoranthene	0.66 mg/kg	ND
Benzo(a)pyrene	0.66 mg/kg	MD
Indeno(1,2,3-cd)pyrene	0.66 mg/kg	ND
Dibenz(a,h)anthracene	0.66 mg/kg	ND
Benzo(g,h,i)perylene	0.66 mg/kg	ND

- * Detection limits may vary with the type of sample and with the concentrations of other species present.
- ** ND = Not detected, below detection limit.

Respectfully submitted, TRUESDAIL LAEGRATORIES, INC.

Julia Nayberg, Manager Inorganic Chemistry

REPORT

TRUESDAIL LABORATORIES, INC.

CHEMISTS - MICROBIOLOGISTS - ENGINEERS

RESEARCH -

DEVELOPMENT - TESTING

United States Pollution Control, Inc.

CLIENT

14080 Slover Avenue Fontana, California 92335

Attention: Tim Albright

SAMPLE

One soil

E

14201 FRANKLIN AVENUE TUBTIN, CALIFORNIA 92680 AREA CODE 714 • 730-6239 AREA CODE 213 • 225-1564 CABLE: TRUELABS

DATE February 12, 1990

RECEIVED February 7, 1990

LABORATORY NO.

35921

INVESTIGATION Total Petroleum Hydrocarbons (EPA 418.1)

RESULTS

Sample I.D.

#6

Milligrams per Kilogram

2,927

Respectfully submitted, TRUESDAIL LABORATORIES, INC.

Julia Nayberg, Manager
Inorganic Chemistry

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REPORT

TRUESDAIL LABORATORIES, INC.

CHEMISTS - MICROBIOLOGISTS - ENGINEERS
RESEARCH - DEVELOPMENT - TESTING

United States Pollution Control, Inc.

CLIENT 14080 Slover Avenue

Fontana, California 92335

Attention: Tim Albright

SAMPLE Soil #6

14201 FRANKLIN AVENUI TUSTIN, CALIFORNIA 9268C AREA CODE 714 • 730-6231 AREA CODE 213 • 225-1564 CABLE: TRUELABE

DATE February 12, 1990

лапия Пармия 7 100

RECEIVED February 7, 1990

LABORATORY NO.

35921

INVESTIGATION Base Neutral Acid Extractables by GC/MS (EPA 8270)

Constituent	RESULTS Approxi Dectec Limi	mate tion Concentr	
Phenol	0.66 m	ng/kg ND	
bis(2-Chloroethyl) ether	0.66 m		
2-Chlorophenol	0.66 m		
1,3-Dichlorobenzene	0.66 m		
1,4-Dichlorobenzene	0.66 m		
Benzyl Alcohol	0.66 m		
1,2-Dichlorobenzene	0.66 m		•
2-Methylphenol	0.66 m		
bis(2-Chloroisopropyl) eth			
	0.66 m		
4-Methylphenol			
N-Nitroso-Di-N-propylamine Hexachloroethane	0.66 m	J. J	
	0.66 m		
Nitrobenzene	0.66 m		
Isophorone	0.66 m		
2-Nitrophenol	0.66 m		
2,4-Dimethylphenol	0.66 m		
Benzoic Acid	0.66 m		
bis(2-Chloroethyoxy) methan			
2,4-Dichlorophenol	0.66 m		
1,2,4-Trichlorobenzene	• 0.66 m	g/kg ND	

- * Detection limits may vary with the type of sample and with the concentration of other species present.
- ** ND = Not detected, below detection limit.

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United States Pollution Control, Inc. Laboratory Number 35921 February 12, 1990 Page Two

Naphthalene	<u>Constituent</u>	Approximate Detection Limit*	Concentration** (mg/kg)
4-Chloroaniline	Wanhthalene	0.66 mg/kg	ND
Hexachlorobutadiene			ИD
4-Chloro-3-methylphenol			
2-Methylnaphthalene			ND
Hexachlorocyclopentadiene 0.66 mg/kg ND 2,4,6-Trichlorophenol 0.66 mg/kg ND 2,4,5-Trichlorophenol 0.66 mg/kg ND 2-Chloronaphthalene 0.66 mg/kg ND 2-Nitroaniline 0.66 mg/kg ND Dimethyl phthalate 0.66 mg/kg ND Acenaphthylene 0.66 mg/kg ND 3-Nitroaniline 0.66 mg/kg ND Acenaphthene 0.66 mg/kg ND 2,4-Dinitrophenol 0.66 mg/kg ND 2,4-Dinitrophenol 0.66 mg/kg ND 2,4-Dinitrotoluene 0.66 mg/kg ND 2,4-Dinitrotoluene 0.66 mg/kg ND 2,6-Dinitrotoluene 0.66 mg/kg ND Diethylphthalate 0.66 mg/kg ND 4-Nitroaniline 0.66 mg/kg ND 4-Nitroaniline 0.66 mg/kg ND 4-Nitrosodiphenylamine 0.66 mg/kg ND N-Nitrosodiphenylamine 0.66 mg/kg ND N-Nitrosodiphenylamine 0.66 mg/kg ND <td></td> <td></td> <td>ND</td>			ND
2,4,6-Trichlorophenol			ND
2,4,5-Trichlorophenol			ND
2-Chloronaphthalene			•
2-Nitroaniline			ND
Dimethyl phthalate			ND
Acenaphthylene			
3-Nitroaniline			ND
Acenaphthene 0.66 mg/kg ND 2,4-Dinitrophenol 0.66 mg/kg ND 4-Nitrophenol 0.66 mg/kg ND Dibenzofuran 0.66 mg/kg ND 2,4-Dinitrotoluene 0.66 mg/kg ND 2,4-Dinitrotoluene 0.66 mg/kg ND Diethylphthalate 0.66 mg/kg ND 4-Chlorophenyl phenyl ether 0.66 mg/kg ND Fluorene 0.66 mg/kg ND 4-Nitroaniline 0.66 mg/kg ND 4-Nitrosodiphenylamine 0.66 mg/kg ND N-Nitrosodiphenylamine 0.66 mg/kg ND 4-Bromophenyl phenyl ether 0.66 mg/kg ND Hexachlorobenzene 0.66 mg/kg ND Pentachlorophenol 0.66 mg/kg ND Phenanthrene 0.66 mg/kg ND Anthracene 0.66 mg/kg ND Di-n-butylphthalate 0.66 mg/kg ND Pyrene 0.66 mg/kg ND Butyl benzyl phthalate 0.66 mg/kg ND Butyl benzyl phthalate 0.66 mg/kg ND			ND
2,4-Dinitrophenol 0.66 mg/kg ND 4-Nitrophenol 0.66 mg/kg ND Dibenzofuran 0.66 mg/kg ND 2,4-Dinitrotoluene 0.66 mg/kg ND 2,6-Dinitrotoluene 0.66 mg/kg ND Diethylphthalate 0.66 mg/kg ND 4-Chlorophenyl phenyl ether 0.66 mg/kg ND Fluorene 0.66 mg/kg ND 4-Nitroaniline 0.66 mg/kg ND 4,6-Dinitro-2-methylphenol 0.66 mg/kg ND N-Nitrosodiphenylamine 0.66 mg/kg ND 4-Bromophenyl phenyl ether 0.66 mg/kg ND Hexachlorobenzene 0.66 mg/kg ND Pentachlorophenol 0.66 mg/kg ND Phenanthrene 0.66 mg/kg ND Anthracene 0.66 mg/kg ND Di-n-butylphthalate 0.66 mg/kg ND Pyrene 0.66 mg/kg ND Butyl benzyl phthalate 0.66 mg/kg ND			ND
4-Nitrophenol 0.66 mg/kg ND Dibenzofuran 0.66 mg/kg ND 2,4-Dinitrotoluene 0.66 mg/kg ND 2,6-Dinitrotoluene 0.66 mg/kg ND Diethylphthalate 0.66 mg/kg ND 4-Chlorophenyl phenyl ether 0.66 mg/kg ND Fluorene 0.66 mg/kg ND 4-Nitroaniline 0.66 mg/kg ND 4,6-Dinitro-2-methylphenol 0.66 mg/kg ND N-Nitrosodiphenylamine 0.66 mg/kg ND 4-Bromophenyl phenyl ether 0.66 mg/kg ND Hexachlorobenzene 0.66 mg/kg ND Pentachlorophenol 0.66 mg/kg ND Phenanthrene 0.66 mg/kg ND Anthracene 0.66 mg/kg ND Di-n-butylphthalate 0.66 mg/kg ND Pyrene 0.66 mg/kg ND Butyl benzyl phthalate 0.66 mg/kg ND			ND
Dibenzofuran 0.66 mg/kg ND 2,4-Dinitrotoluene 0.66 mg/kg ND 2,6-Dinitrotoluene 0.66 mg/kg ND Diethylphthalate 0.66 mg/kg ND 4-Chlorophenyl phenyl ether 0.66 mg/kg ND Fluorene 0.66 mg/kg ND 4-Nitroaniline 0.66 mg/kg ND 4,6-Dinitro-2-methylphenol 0.66 mg/kg ND N-Nitrosodiphenylamine 0.66 mg/kg ND 4-Bromophenyl phenyl ether 0.66 mg/kg ND Hexachlorobenzene 0.66 mg/kg ND Pentachlorophenol 0.66 mg/kg ND Phenanthrene 0.66 mg/kg ND Anthracene 0.66 mg/kg ND Di-n-butylphthalate 0.66 mg/kg ND Fluoranthene 0.66 mg/kg ND Pyrene 0.66 mg/kg ND Butyl benzyl phthalate 0.66 mg/kg ND			. ND
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Butyl benzyl phthalate 0.66 mg/kg ND			ND
Bucyl Denzyl phenalace			
3,3'-Dichlorobenzidine 0.66 mg/kg ND	2 31 Dichlorobenzidine	0.66 mg/kg	ND
Benzo(a)anthracene 0.66 mg/kg ND			
bis(2-ethylhexyl)phthalate 0.66 mg/kg ND			

^{*} Detection limits may vary with the type of sample and with the concentrations of other species present.

^{**} ND = Not detected, below detection limit.

TRUESDAIL LABORATORIES, INC.

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Constituent	Approximate Detection Limit*	Concentration** (mg/kg)
Chrysene	0.66 mg/kg	ND
Di-n-octyl phthalate	0.66 mg/kg	ND
Benzo(b)fluoranthene	0.66 mg/kg	ND
Benzo(k)fluoranthene	0.66 mg/kg	ND
Benzo(a)pyrene	0.66 mg/kg	ND
Indeno(1,2,3-cd)pyrene	0.66 mg/kg	ND
Dibenz(a,h)anthracene	0.66 mg/kg	ND
Benzo(g,h,i)perylene	0.66 mg/kg	ND

- * Detection limits may vary with the type of sample and with the concentrations of other species present.
- ** ND = Not detected, below detection limit.

Respectfully submitted, TRUESDAIL LABORATORIES, INC.

Julia Nayberg, Manager 4
Inorganic Chemistry